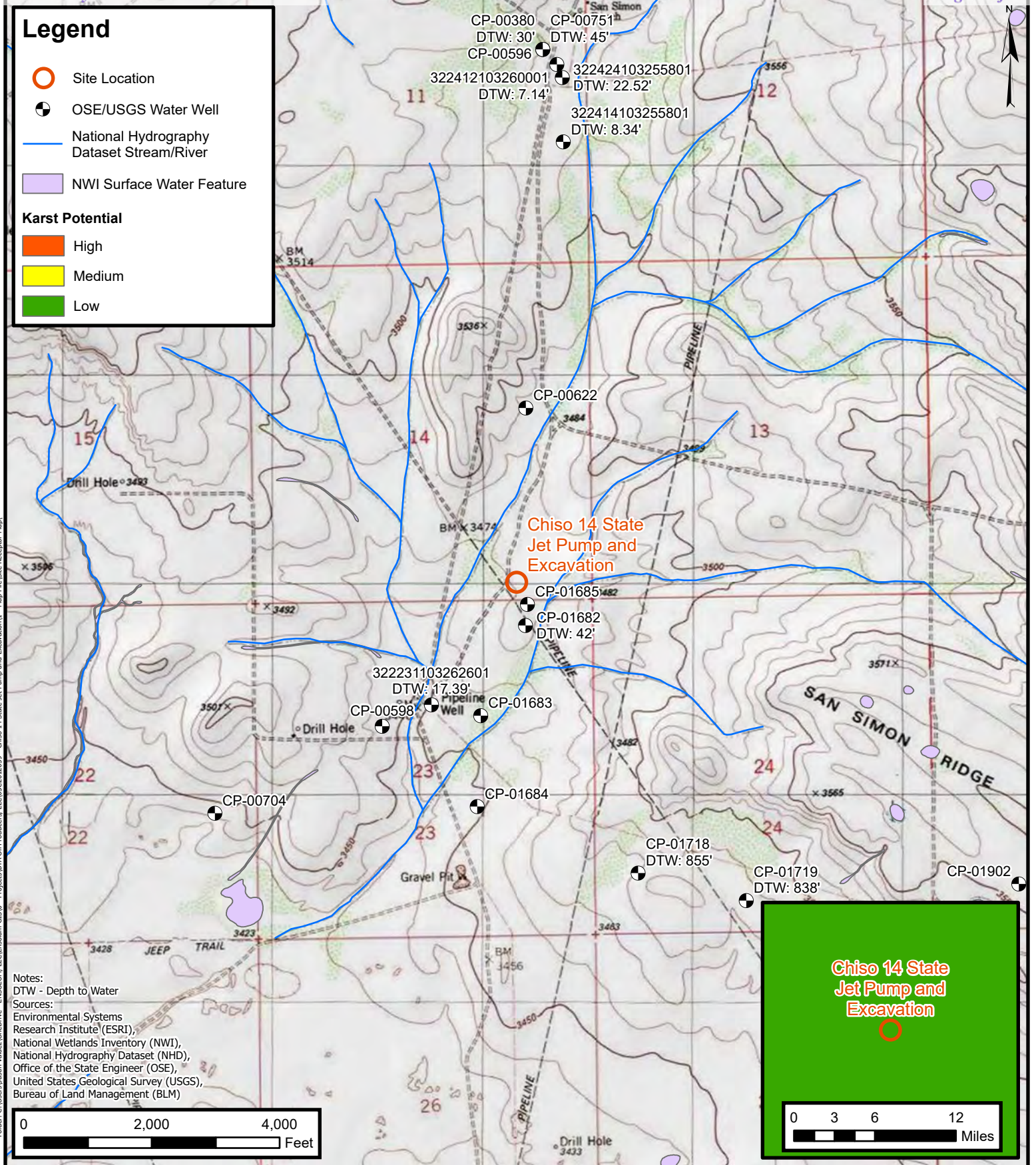




Figures

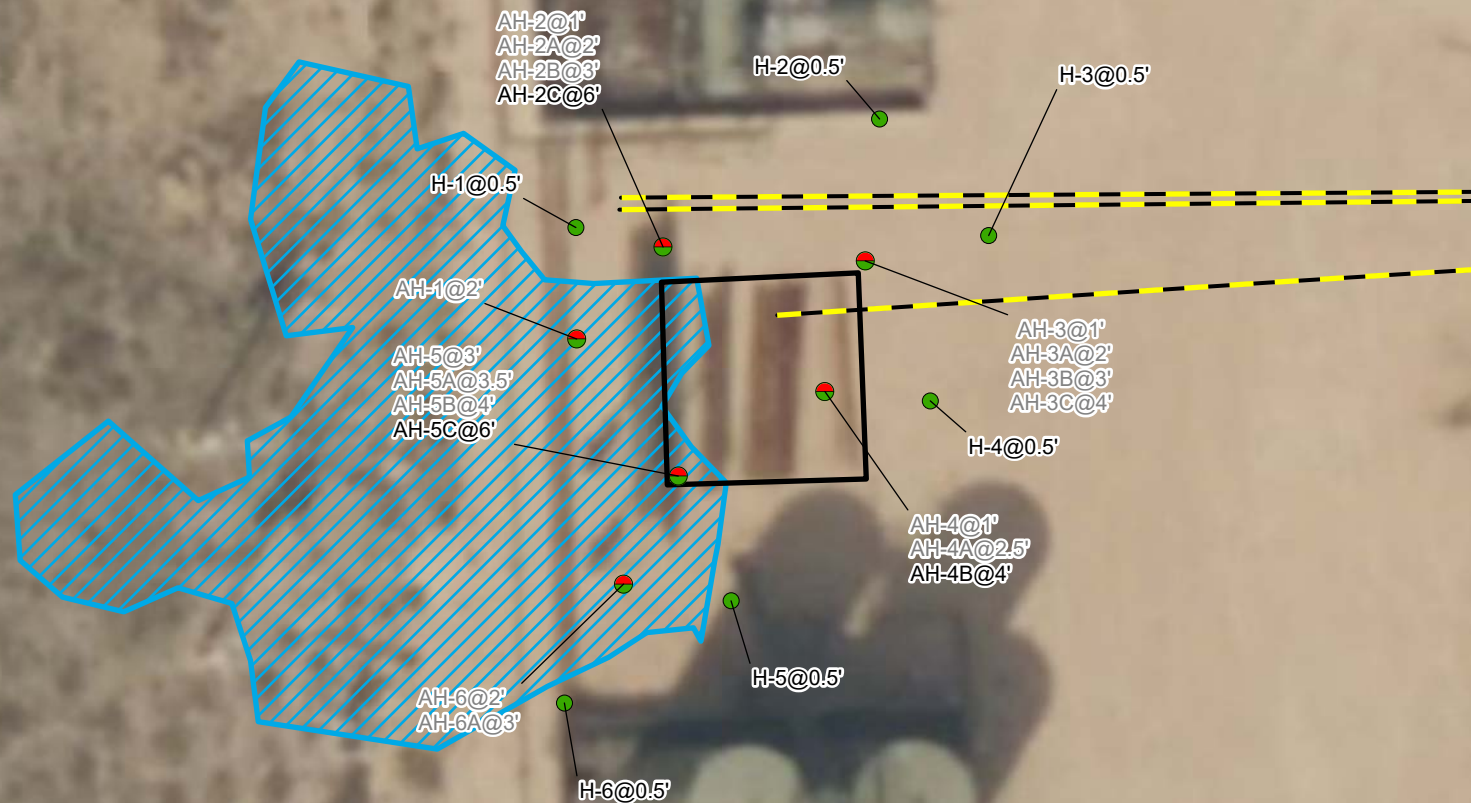


Site Receptor Map
BTA Oil Producers, LLC
Chiso 14 State Jet Pump and Excavation
Incident Number: nAPP2205837214
Unit P, Sec 14, T22S, R34E
Lea County, New Mexico

FIGURE
1

Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- Oil and Gas Utility Line
- ▨ Excavation Extent
- Jet Pump / Production Equipment



Notes:
 Sample ID @ Depth Below Ground Surface
 Grey text represents samples that have been excavated

0 25 50
 Feet

Source:
 Bing Maps



Delineation Soil Sample Locations

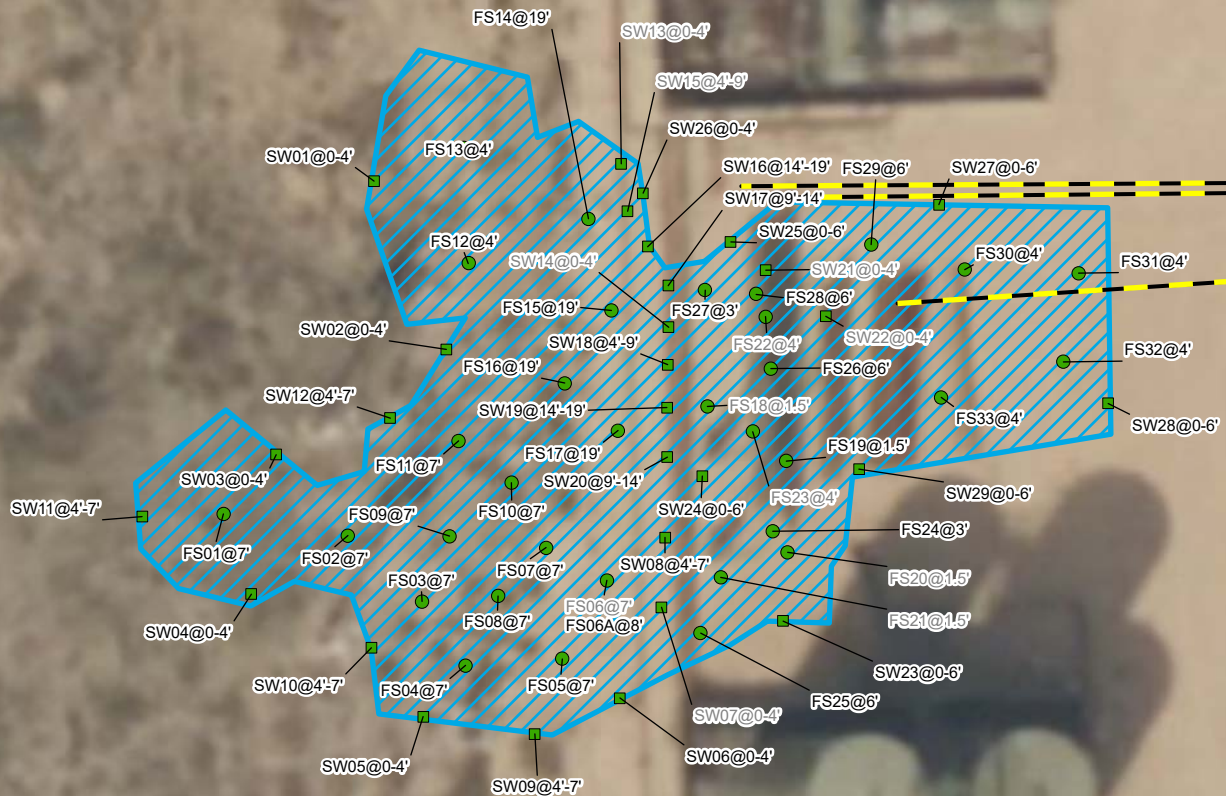
XTO Energy, Inc
 Chiso 14 State Jet Pump and Excavation
 Incident Number: nAPP2205837214
 Unit P, Sec 14, T22S, R34E
 Lea County, New Mexico

FIGURE

2

Legend

- Excavation Floor Soil Sample in Compliance with Closure Criteria
- Excavation Sidewall Sample in Compliance with Closure Criteria
- Oil and Gas Utility Line
- ▨ Excavation Extent



Notes:
 Sample ID @ Depth Below Ground Surface
 Grey text represents samples that have been excavated

0 25 50
 Feet

Source:
 Bing Maps



Excavation Soil Sample Locations

XTO Energy, Inc
 Chiso 14 State Jet Pump and Excavation
 Incident Number: nAPP2205837214
 Unit P, Sec 14, T22S, R34E
 Lea County, New Mexico

FIGURE
 3



Table 1

Soil Sample Analytical Results



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Chiso 14 State Jet Pump and Excavation
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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Confirmation Soil Samples										
FS01	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS02	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS03	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS04	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS05	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS06	06/13/2023	7	<0.050	<0.300	<10.0	860	204	860	1,064	32.0
FS06A	07/12/2023	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS07	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS08	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS09	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS10	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS11	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS12	06/13/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS13	06/13/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS14	06/13/2023	19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS15	06/13/2023	19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS16	06/13/2023	19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
FS17	06/13/2023	19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS18	06/13/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	10,400
FS19	06/13/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS20	06/13/2023	1.5	<0.050	<0.300	<10.0	359	97.0	359	456	400
FS21	06/13/2023	1.5	<0.050	<0.300	<10.0	25.6	<10.0	25.6	25.6	736
FS22	07/27/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	7,330
FS23	07/24/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,170
FS24	10/02/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400
FS25	10/02/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS26	10/03/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS27	10/03/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Chiso 14 State Jet Pump and Excavation
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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
FS28	10/03/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
FS29	10/03/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	352
FS30	10/03/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
FS31	10/03/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
FS32	10/03/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS33	10/03/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SW01	06/13/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW02	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW03	06/13/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW04	06/13/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW05	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW06	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SW07	06/12/2023	0-4	<0.050	<0.300	<10.0	176	38.6	176	215	1,340
SW08	06/12/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW09	06/12/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SW10	06/12/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW11	06/13/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW12	06/12/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW13	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,120
SW14	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,920
SW15	06/12/2023	4-9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	688
SW16	06/12/2023	14-19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW17	06/12/2023	9-14	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW18	06/12/2023	4-9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW19	06/12/2023	14-19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW20	06/12/2023	9-14	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Chiso 14 State Jet Pump and Excavation
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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
SW21	07/31/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	18,000
SW22	07/31/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	11,600
SW23	10/03/2023	0-6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW24	10/03/2023	0-6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SW25	10/03/2023	0-6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SW26	10/03/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW27	10/03/2023	0-6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW28	10/03/2023	0-6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW29	10/03/2023	0-6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
Delineation Soil Samples										
AH-1	07/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
AH-2	07/06/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	9,600
AH-2A	07/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,440
AH-2B	09/14/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,400
AH-2C	09/14/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
AH-3	07/06/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,520
AH-3A	07/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,080
AH-3B	09/14/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,410
AH-3C	09/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
AH-4	07/06/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,840
AH-4A	07/06/2023	2-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,440
AH-4B	09/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
AH-5	07/06/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,130
AH-5A	07/06/2023	3-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,560
AH-5B	09/14/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,000
AH-5C	09/14/2023	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	480



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Chiso 14 State Jet Pump and Excavation
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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
AH-6	07/06/2023	2	<0.050	<0.300	<10.0	115	20.8	115	136	96.0
AH-6A	09/14/2023	3	<0.050	<0.300	<10.0	11.7	<10.0	11.7	11.7	592
H-1	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
H-2	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
H-3	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
H-4	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
H-5	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
H-6	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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



APPENDIX A

Tetra Tech Remediation Work Plan



April 20, 2023

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**RE: Remediation Workplan
BTA Oil Producers
Chiso 14 8711 #3 Jet Pump Release
Lea County, New Mexico
nAPP2205837214**

Oil Conservation Division:

Tetra Tech, Inc. (Tetra Tech) was contracted by BTA Oil Producers (BTA) to compile and prepare a closure report for remediation activities conducted by RXsoil and Alves Oilfield Solutions, Inc. following a produced water release that occurred at the Chiso 14 8711 #3, Section 14, Township 22 South, Range 34 East, Lea County, New Mexico (Site). The release site coordinates are 32.38511°, -103.43594°. The site location is shown on **Figures 1 and 2**.

Background

According to the State of New Mexico C-141 Initial Report, a release at the Chiso 14 8711 #3 occurred after a plug on a jet pump manifold failed, resulting in approximately 165 barrels (bbls) of produced water to be released into an open excavation at the site. Approximately 70 bbls of produced water was recovered from the excavated area. The open excavation at the site was being conducted to investigate evidence of a suspected release that was discovered by the landowner. The jet pump release flowed onto the pad and the adjacent pasture west of the Site, impacting an area with a length of 60 feet and a maximum width of 80 feet. On February 26, 2022, the release was discovered and reported to the New Mexico Oil Conservation Division (NMOCD). The C-141 is included in **Appendix A**.

Suspected Release

BTA's subcontractor, RXsoil conducted site assessment activities from in September through November of 2021 based on evidence of a suspected release at the site. A total of seven (7) soil borings (SP1-A, SP3-A, SP4-A, and SP1 through SP4) were installed to depths ranging from ground surface to 2 ft bgs. The investigatory delineation sample locations are shown on **Figure 3**. The samples were submitted to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for TPH by method 8015 modified, BTEX by method 8021B, and Chloride by EPA Method 4500. The analytical results are summarized in **Table 1** and the analytical laboratory reports are included in **Appendix D**.



Site Characterization

Significant Water Features

According to the NFHL (National Flood Hazard Layer) Flood Data Application and the USGS (United States Geological Survey) National Water Information System Mapper, there are two intermittent water features located approximately 785 feet to the west and 650 feet to the east of the horizontal extent of the release. No significant watercourses were identified within 300 feet of the Site. There were no playas, lakebeds, sinkholes, springs, wetlands, subsurface mines, private domestic water wells, or floodplains located within the specified distances. Additionally, the site is located in a low karst area. The NFHL Map, USGS Mapper, and NMOSE data are shown in **Appendix B**.

Significant Boundaries

According to Google Earth US Government City Boundaries and US School Districts, the lateral extents of the release were not within incorporated municipal boundaries, defined municipal fresh water well field, or a school district. Additionally, there were no occupied permanent residences, schools, hospitals, institutions, or churches located within the specified distances of the lateral extents of the release.

Groundwater Review

Groundwater research was completed for the site through the USGS (United States Geological Survey) National Water Information System and New Mexico Office of the State Engineer (NMOSE) Water Rights Reporting System. Two Points of Diversion (POD) were identified within a 0.5-mile radius of the Site. CP-1682-POD1 South 2, an active well located approximately 0.13 miles south of the horizontal extent of the release. NMOSE records indicate the well was drilled to a total depth of 294 ft bgs on September 13, 2019, and groundwater was first encountered at 42 ft bgs. USGS well # 322231103262601 is located approximately 0.44 miles southwest of the Site. USGS records indicate the well was drilled to a total depth of 60 ft bgs on with a measured water depth of 17.39 ft bgs. POD records are presented in **Appendix B**.

POD ID	Distance from Site (Miles)	Date of Data	Resource of Information	Depth of Well	Depth to Water
CP-1682-POD1 South 2	0.13	09/13/2019	NMOSE	294'	42'
322231103262601	0.44	12/18/2015	USGS	60'	17.39'

Regulatory

A risk-based evaluation was performed for the site following the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to



determine the Recommended Remedial Action Levels (RRALs) for Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 milligrams per kilogram (mg/kg), 50 mg/kg for total BTEX, 100 mg/kg for total TPH and 600 mg/kg for Chlorides.

Remediation Activities

Based on the results of the suspected release investigation activities, BTA's subcontractors, RXsoil and Alves Oilfield Solutions, LLC (Alves) mobilized to the site to begin remediation activities on February 23, 2022. On February 26, 2022, a release caused by a plug failure on a jet pump at the site, adjacent to the excavation, spilled produced water onto the pad and into the open excavation of the suspected release area. Approximately 165 bbls of produced water was released and 70 bbls were recovered from the excavation area. The release impacted area is shown on **Figure 4**.

Between the time of the initial excavation activities and the release from the jet pump into the excavation, the excavation was dug to depths ranging from 3 to 9 ft bgs. Five bottom samples were collected along the excavation bottom (B1 through B5) to delineate to vertical extent of impact. Sample points B2 and B5 reported concentrations below NMOCD limits by laboratory analysis. Sample point B4 was confirmed below NMOCD limits at 5 ft bgs. Sample points B1 and B3 were field screened and indicated chloride concentrations of 356 ppm and non-detect, respectively. Sample points B1 and B3 were not submitted for laboratory analysis before the jet pump release into the excavated area on top of the previously sampled excavation. RXsoil's field screening data is presented in **Appendix E**.

From February 28, 2022, through June 7, 2022, following the jet pump release into the excavated area, Alves and RXsoil continued remediation activities at the site. The areas of impact were excavated to a depth ranging from 3 ft bgs to 19 ft bgs. Field screening was conducted throughout the excavation process to determine the appropriate depth for confirmation sampling. It should be noted that no delineation or confirmation samples were submitted for laboratory analysis in the release footprint around the jet pump area due to safety concerns and the inability to maneuver equipment into the area. The confirmation sample locations area shown on **Figure 5**.

A total of seven (7) confirmation bottom hole samples (BS 1 through BS 6 and SP 2) were collected and a total of eleven (11) confirmation sidewall samples (SW 1 through SW 11) were collected by Alves on February 28, 2022, and June 7, 2022. Additionally, seven (7) confirmation samples (N Wall 2, Bottom, N Wall 1, N Bottom, S Wall, bottom #2 and W Wall) were collected at the Stie from March 8, 2022, through March 10, 2022. Unfortunately, mapping data and sample locations are not available for these sample points. The confirmation soil samples were submitted to the Cardinal Laboratory in Hobbs, New Mexico to be analyzed for TPH method 8015 modified, BTEX method 8021B, and Chloride by EPA Method 4500. The analytical results are summarized in **Table 2** and the analytical laboratory reports are included in **Appendix D**.

Referring to Table 2, all final confirmation samples indicated benzene, BTEX, TPH, and chloride concentrations were below the RRALs of 100 mg/kg of Total TPH, 10 mg/kg for Benzene, 50 mg/kg for Total BTEX and 600 mg/kg for chlorides in all confirmation samples.



A 20 ml liner was installed at 19 ft bgs into the east side of the excavation as an extra precautionary measure after confirmation sample SP 2 reported below NMOCD RRALs at 18 and 19 ft bgs. The liner area was subsequently backfilled to approximately 13 ft bgs. In the release area adjacent to the jet pump on the site, field screening was conducted which indicated elevated chloride concentrations in the top two feet bgs. Due to the equipment and power poles in this area, Alves was unable to excavate this area.

Work Plan

Based on the C-141 (nAPP2205837214) and information provided by BTA, Tetra Tech performed site characterization and groundwater research to determine groundwater depth, proximity from significant water features, and proximity from specified populated entities to determine RRALs and assess the impacted area. Based on the *OCD Guidelines for Remediation of Leaks, Spills, and Releases*, updated August 14, 2018, according to the groundwater data found during research activities, the RRALs of 600 mg/kg for chlorides and 100 mg/kg for TPH will be followed for the site. The C-141 is included in **Appendix A**.

BTA proposes to vertically and horizontally delineate the area surrounding the jet pump at the Site and between the jet pump and open excavation area by installing twelve (12) auger holes within and on the perimeter of the release impacted area. Vertical auger holes (AH-1 through AH-6) will be installed to a depth of 4 ft bgs, or feasible utilizing a hand auger, and samples will be collected at each 1-foot interval for submission to the analytical laboratory. Horizontal auger holes (H-1 through H-6) will be installed to a depth of 1 ft bgs along the perimeter of the release footprint in an attempt to achieve horizontal delineation. A deferral may be requested in these areas due to the equipment present at the Site and the safety concerns associated with excavating in these areas, pending analytical results.

Due to insufficient data regarding the confirmation samples collected at the Site, BTA proposes to re-sample the open excavation at the Site by collecting nine (9) sidewall samples and nine (9) bottom samples. The confirmation samples will be collected as a 5-point composite representative of approximately every 500 sq ft to demonstrate that the excavated area has been properly remediated. The Excavated area ranges in depth from 3 ft bgs to 19 ft bgs and covers an area of approximately 3,350 sq ft. A 20-mil liner was installed to 19 ft bgs and will be removed for the re-sampling event. A workplan sample location map is presented on **Figure 6**.

BTA requests approval of this workplan as soon as possible due to the safety concerns associated with the open excavation and landowner concerns regarding closure of the Site.

Pending analytical results, additional excavation and sampling activities may be required at the Site. If you require any additional information or have any questions or comments, please contact us at (432) 682-4559.



Respectfully submitted,
TETRA TECH

A handwritten signature in blue ink that reads 'John Faught'.

John Faught, G.I.T.
Project Manager

A handwritten signature in blue ink that reads 'Clair Gonzales'.

Clair Gonzales, P.G.
Senior Project Manager

Figures

Figure 1 - Site Overview Map

Figure 2 - Topographic Map

Figure 3 – Investigation Delineation Map

Figure 4 – Release Footprint Map

Figure 5 – Excavation Area and Confirmation Sample Location Map

Figure 6 – Workplan Sample Location Map

Tables

Table 1 – Delineation Analytical Results

Table 2 – Confirmation Analytical Results

Appendices

Appendix A – C-141

Appendix B – Site Characterization

Appendix C – Photographic Documentation

Appendix D – Analytical Laboratory Reports

Appendix E – RxSoil Screening Data



Figures

NORTH

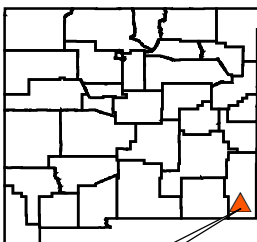


LEGEND

▲ APPROXIMATE SITE LOCATION

0 16,000 32,000
Feet
Approximate Scale

NEW MEXICO



SITE LOCATION



FIGURE 1
SITE FEATURE MAP
CHISO 14 8711 #3
LEA COUNTY, NEW MEXICO
32.384929°, -103.435741°

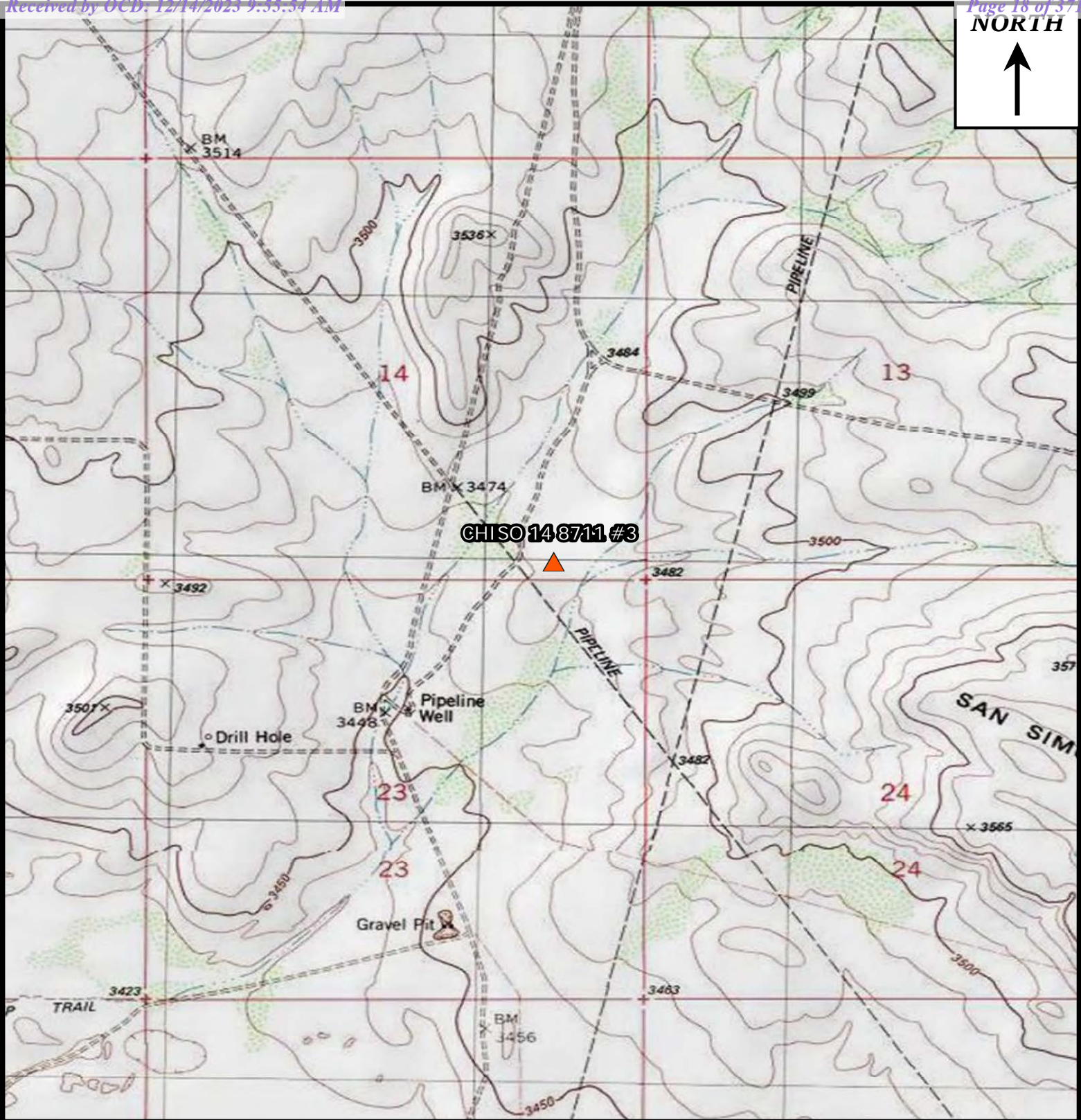
Project: 212C-MD-02063

Date: 3/14/2023

Name: Figure 1 - Chiso 14



NORTH



LEGEND

▲ APPROXIMATE SITE LOCATION



FIGURE 2
TOPOGRAPHIC MAP
CHISO 14 8711 #3
LEA COUNTY, NEW MEXICO
32.384929°, -103.435741°

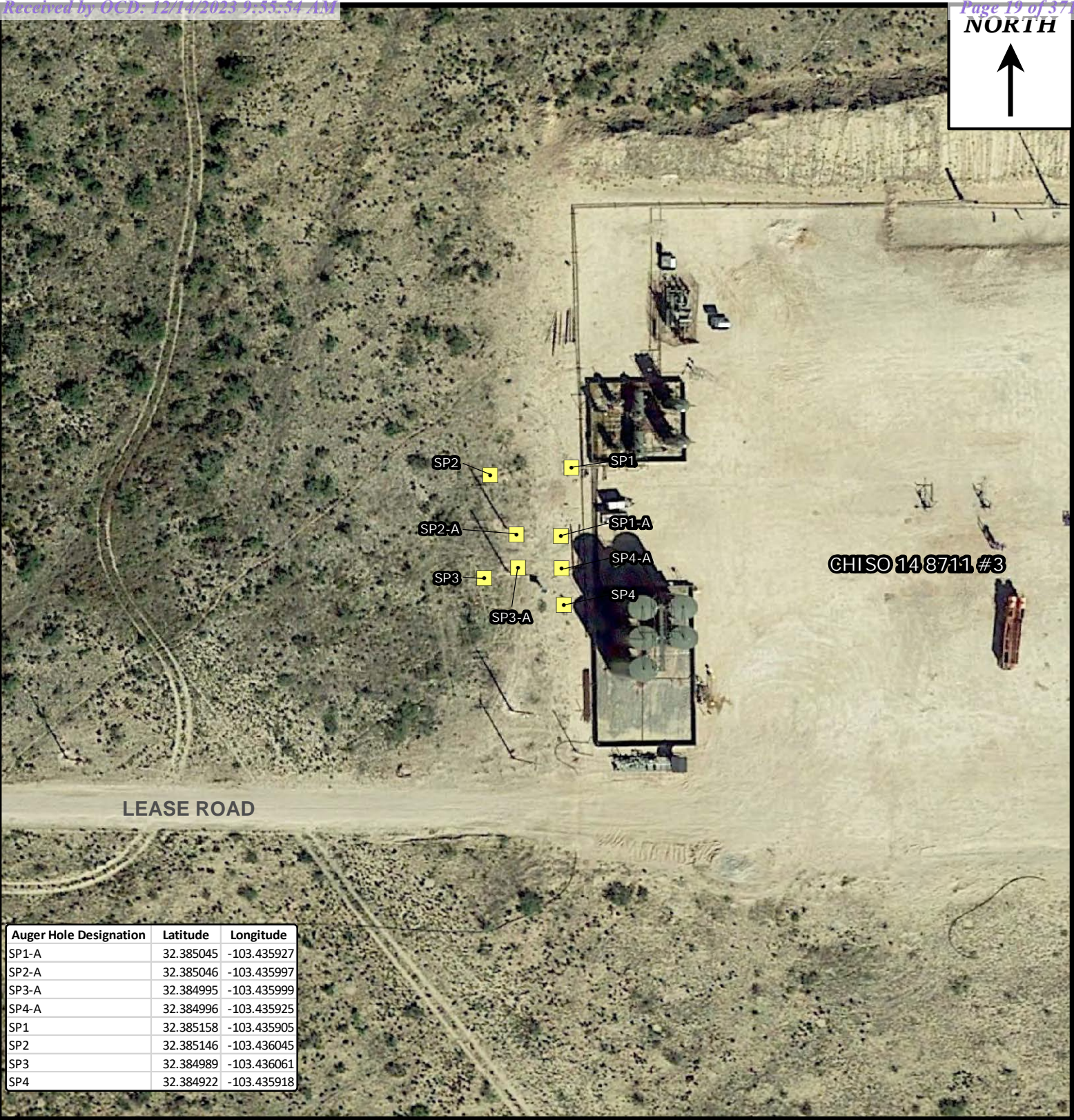
0 1,000 2,000
Feet
Approximate Scale

Project: 212C-MD-02063

Date: 3/14/2023

Name: Figure 1 - Chiso 14





Auger Hole Designation	Latitude	Longitude
SP1-A	32.385045	-103.435927
SP2-A	32.385046	-103.435997
SP3-A	32.384995	-103.435999
SP4-A	32.384996	-103.435925
SP1	32.385158	-103.435905
SP2	32.385146	-103.436045
SP3	32.384989	-103.436061
SP4	32.384922	-103.435918

LEGEND
■ SAMPLE LOCATIONS

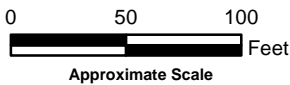


FIGURE 3
INVESTIGATION SAMPLE LOCATION MAP
CHISO 14 8711 #3
LEA COUNTY, NEW MEXICO
32.384929°, -103.435741°

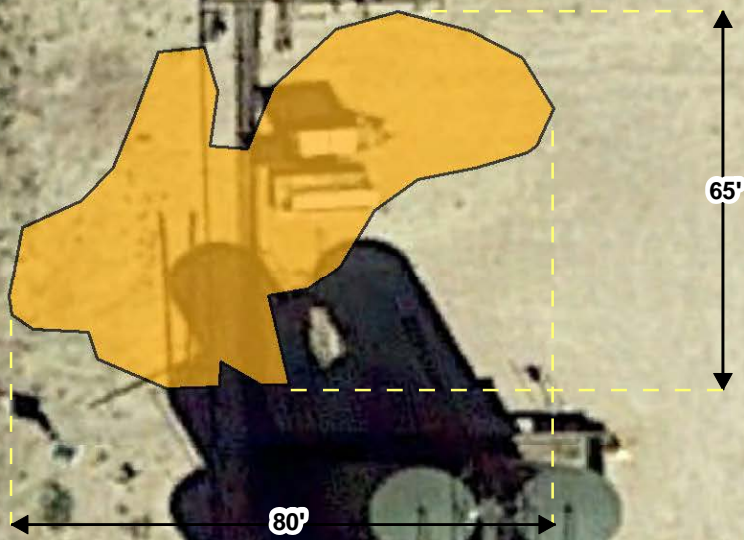
Project: 212C-MD-02063
Date: 3/14/2023
Name: Figure 3 - Chiso 14



NORTH



SITE LOCATOR MAP



Legend
RELEASE FOOTPRINT (2/26/2022)



www.tetrattech.com

901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

BTA Oil Producers

**RELEASE FOOTPRINT MAP
CHISO 14 8711 #3**

LEA COUNTY, NEW MEXICO
(32.3847142°, -103.4356292°)

PROJECT NO.: 212C-MD-03005

DATE: APRIL 18, 2023

DESIGNED BY: EMF

Figure No.

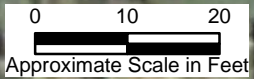
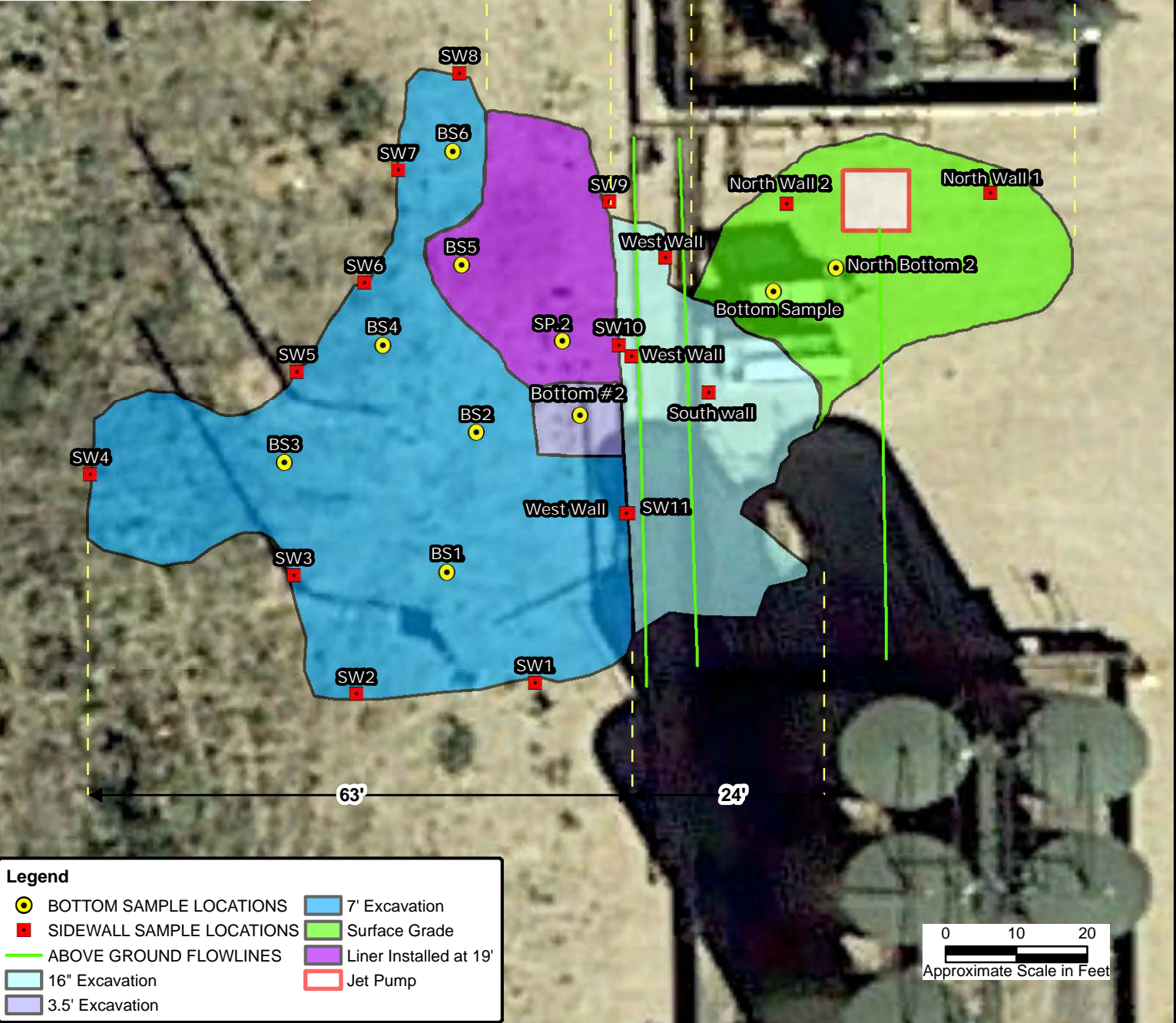
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NORTH



SITE LOCATOR MAP

Document Path: C:\Users\E\MORENO\LORES\Documents\Projects\BTA Oil Producers, LLC\030005 - Chiso 14\GIS\PDF\Updated Figure 5\Figure 5 - 030005 - BTA - Chiso 14.mxd



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Phone: (432) 682-4559
Fax: (432) 682-3946

BTA Oil Producers

Confirmation Sample Location Map
CHISO 14 8711 #3

LEA COUNTY, NEW MEXICO
(32.3847142°, -103.4356292°)

PROJECT NO.: 212C-MD-03005

DATE: MAY 9, 2023

DESIGNED BY: EMF

Figure No.

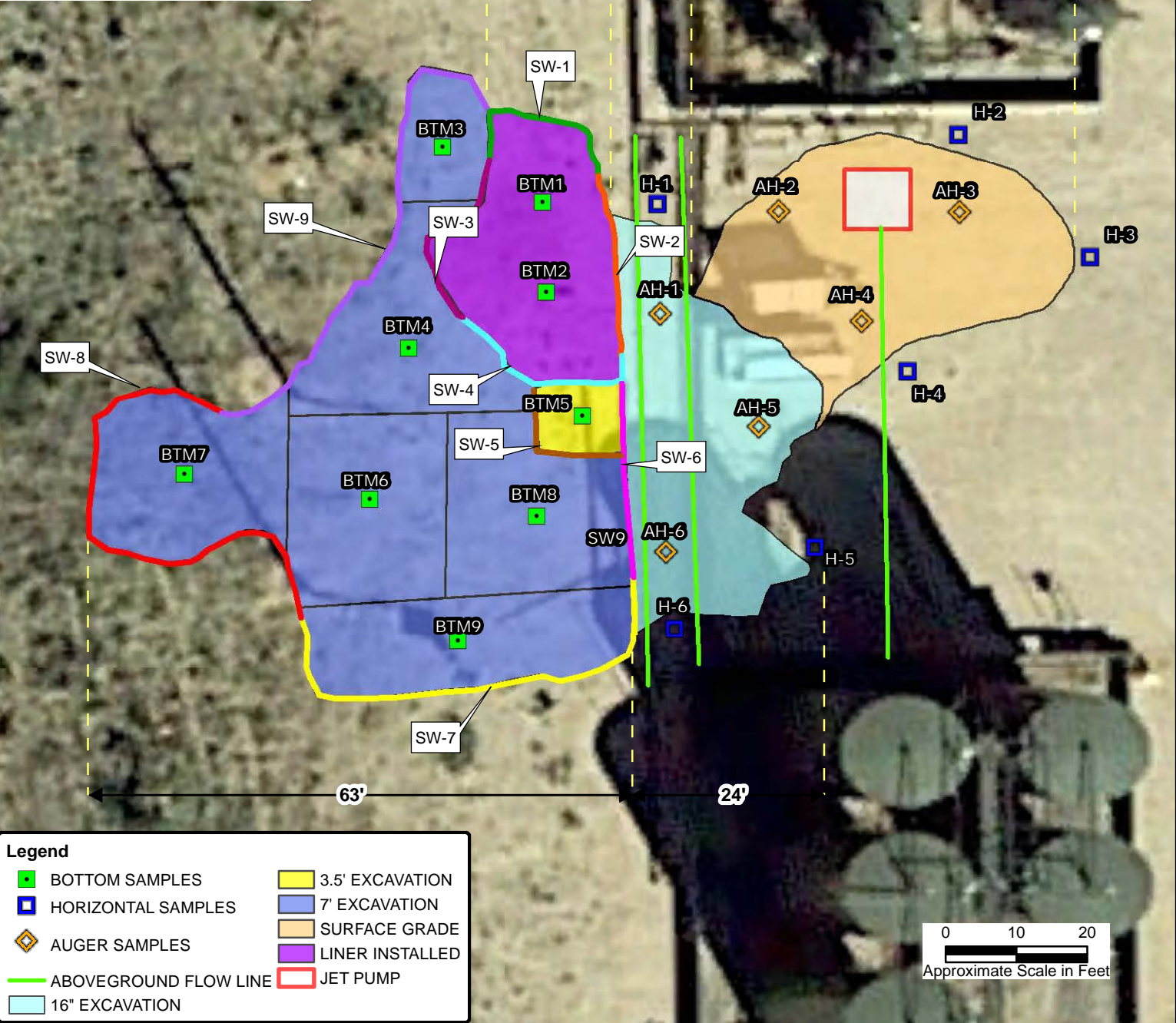
5

NORTH



SITE LOCATOR MAP

Document Path: C:\Users\E.MORENO\OneDrive\Documents\Projects\BTA Oil Producers, LLC\030005 - Chiso 14\GIS\MXD\Figure 6 - 030005 - BTA - Chiso 14.mxd



Legend

- BTM (Green square)
- SW (Blue square)
- AH (Orange diamond)
- H (Blue square)
- 3.5' EXCAVATION (Yellow)
- 7' EXCAVATION (Blue)
- SURFACE GRADE (Orange)
- LINER INSTALLED (Purple)
- ABOVEGROUND FLOW LINE (Green line)
- 16" EXCAVATION (Cyan)
- JET PUMP (Red box)



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Fax: (432) 682-3946

BTA Oil Producers

**PROPOSED SAMPLE LOCATION MAP
CHISO 14 8711 #3**

LEA COUNTY, NEW MEXICO
(32.3847142°, -103.4356292°)

PROJECT NO.: 212C-MD-03005

DATE: APRIL 20, 2023

DESIGNED BY: EMF

Figure No.

6



Tables

Table 1
Delineation Analytical Results
BTA Oil Producers
Chiso 14 8711 #3 Jet Pump Release
Lea County, New Mexico

Sample ID	Sample Date	Excavtion Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs								100 mg/kg	10 mg/kg				50 mg/kg	600 mg/kg
Surface	9/14/2022	Surface	-	X	<10.0	13	<10.0	13	<0.050	<0.050	<0.050	<0.150	<0.300	50000
1'	9/14/2022	1'	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	2920
2'	9/14/2022	2'	-	X	55	3080	688	3823	<0.050	<0.050	<0.050	<0.150	<0.300	960
SP1	11/15/2021	Surface	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32
	11/15/2021	2.0'	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	48
SP2	11/15/2021	Surface	-	X	<0.10	11.1	<0.10	11.1	<0.050	<0.050	<0.050	<0.150	<0.300	368
	11/15/2021	2.0'	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SP3	11/15/2021	Surface	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
	11/15/2021	2.0'	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	2200
SP4	11/15/2021	Surface	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
	11/15/2021	2.0'	-	X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	48.0

ft = feet below ground surface
(-) = not analyzed for respective constituent
TPH = total petroleum hydrocarbons
BTEX = benzene, toluene, ethylbenzene, xylene
 Exceedance

Table 2
Confirmation Analytical Results
BTA Oil Producers
Chiso 14 8711 #3 Jet Pump Release
Lea County, New Mexico

Sample ID	Sample Date	Excavtion Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs			100 mg/kg						10 mg/kg			50 mg/kg		600 mg/kg
Confirmation Soil Samples Pre-Jet Pump Release														
B2	2/24/2022	-	X	-	<10.0	56.8	14.1	70.9	<0.050	<0.050	<0.050	<0.150	<0.300	80
B4	2/24/2022	5'	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	112
B5	2/24/2022	-	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	96
Confirmation Soil Samples Post-Jet Pump Release														
B1	2/28/2022	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	352
B2	2/28/2022	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	288
B4	3/3/2022	-	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	992
B5	2/28/2022	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	224
SP. 2	2/28/2022	18'	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	176
	2/28/2022	19'	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	176
N Wall 2	3/8/2022	-	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	160
Bottom	3/8/2022	7"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	112
N Wall 1	3/9/2022	9"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
N Bottom	3/9/2022	14"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	560
S Wall	3/9/2022	4"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
Bottom # 2	3/10/2022	6"	X	-	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	448
W Wall	3/10/2022	10"	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	2400
	3/10/2022	10"	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
	3/10/2022	15"	-	X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
SW 1 (CS 1)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SW 2 (CS 2)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
SW 3 (CS 3)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
SW 4 (CS 4)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SW 5 (CS 5)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
SW 6 (CS 6)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW 7 (CS 7)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW 8 (CS 8)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
SW 9 (CS 9)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW 10 (CS 10)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
SW 11 (CS 11)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
BTM1 (CBS 1)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
BTM2 (CBS 2)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0

Table 2
Confirmation Analytical Results
BTA Oil Producers
Chiso 14 8711 #3 Jet Pump Release
Lea County, New Mexico

Sample ID	Sample Date	Excavtion Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total						
RRALs							100 mg/kg	10 mg/kg				50 mg/kg	600 mg/kg	
BTM3 (CBS 3)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
BTM4 (CBS 4)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
BTM5 (CBS 5)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	112.0
BTM6 (CBS 6)	6/7/2022	-	X	-	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	32.0

RRALs (Recommended Remediation Action Levels) are based on NMOCD (New Mexico Oil Conservation Devision) *Guidelines for Remediation of Leaks, Spills, and Releases*.

All screening values and results are presented in milligrams per kilogram (mg/kg)

Bolded cells represent a detected concentration above the respective screening value.

< = analyte was not detected above the respective sample detection limit

ft = feet below ground surface

(-) = not analyzed for respective constituent

TPH = total petroleum hydrocarbons

BTEX = benzene, toluene, ethylbenzene, xylene

Exceedance



Appendix A

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	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
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) nAPP2205837214
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

Location of Release Source

Latitude: 32.38511 Longitude: -103.43594

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Chiso 14 State Jet Pump and Excavation	Site Type: Tank Battery
Date Release Discovered: 2/26/2022	API# (if applicable) Nearest well:

Unit Letter	Section	Township	Range	County
P	14	22S	34E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name:)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 165 BBL	Volume Recovered (bbls) 70 BBL
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Jet Pump Failure.

A plug on the manifold of a Jet Pump failed and allowed water from the supply tank to drain from the pump and proceed westward directly into an active excavation being conducted to remove previously contaminated soil. The volume of recovered water was taken from the excavation. The estimate of the volume of water released was calculated from tank gauge data (attached).

Form C-141


Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
Application ID	

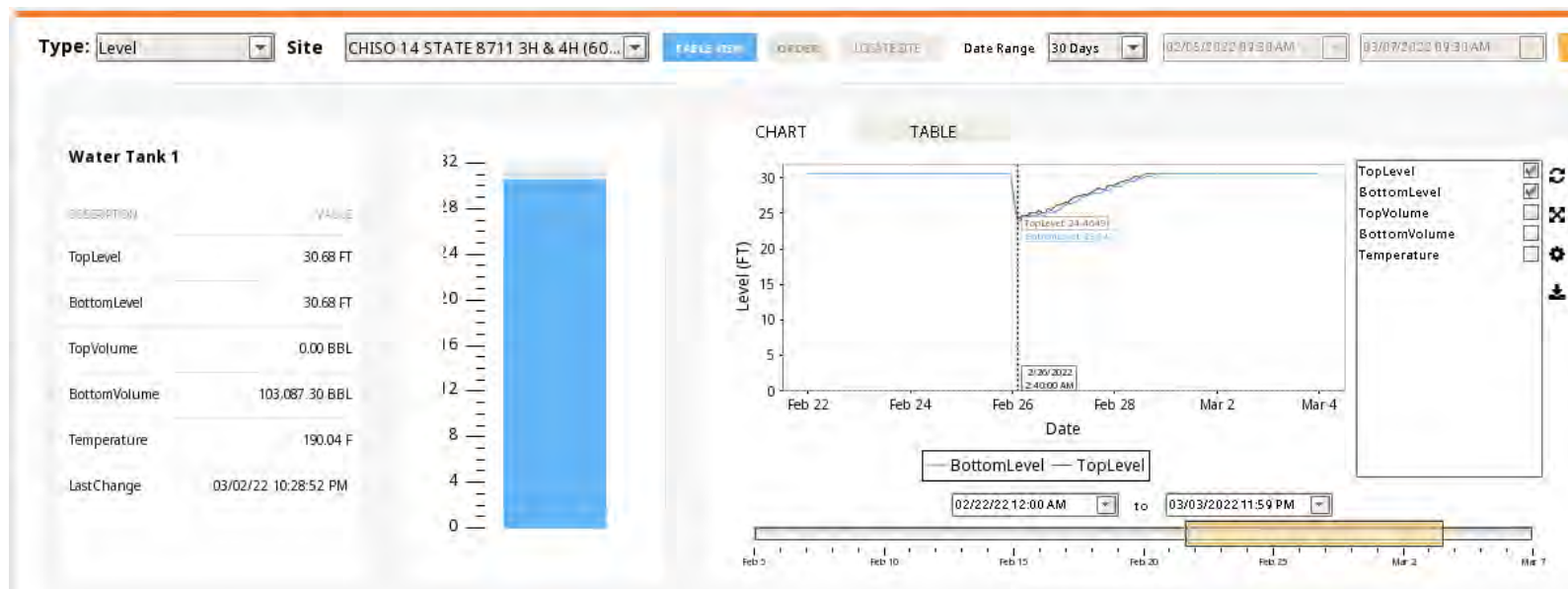
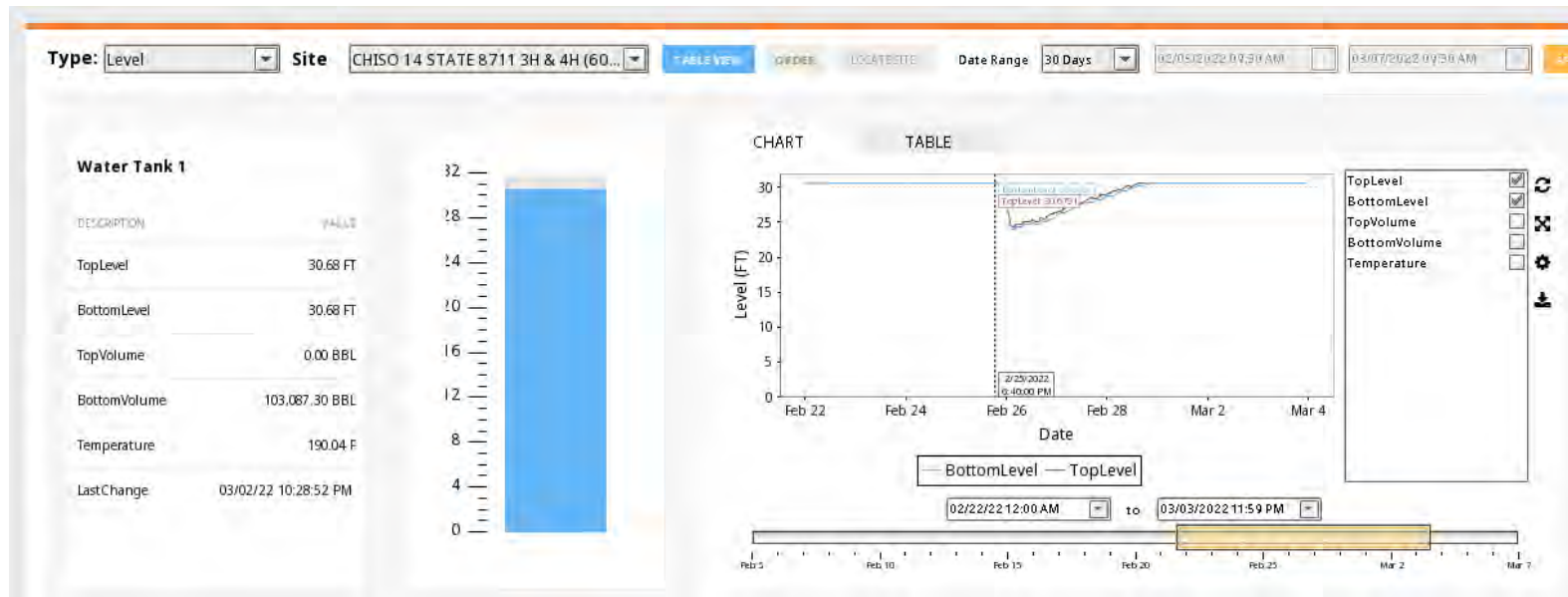
Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The volume of the release exceeds 25 BBL.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by filing a Notice of Release (NOR) on the NMOCD Permitting website on 2/27/2022. The Incident ID listed above was assigned after the NOR was acknowledged by the NMOCD.	

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: Bob Hall Title: Environmental Manager	
Signature: 	Date: 3/8/2022
email: bhall@btaoil.com	Telephone: 432-682-3753
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>3/10/2022</u>

Chiso 14 State Water Tank Gauge – 2/26/2022

NAPP2205837214



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 87973

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 87973
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	3/10/2022



Appendix B

Site Characterization

Site Characterization Summary

Site Information:

BTA Oil Chiso 14 8711 #3 Jet Pump Release (February 2022)
Lea County, New Mexico
T22S, R34E, Section 14
(32.38511°, -103.43594°)

Site Characterization:

- Low Karst
- No significant water features within specified distances
- Groundwater 17.39' BGS 0.44 Miles southwest of the site. (USGS, Section 23, 2015 Sample)
- Groundwater 42' BGS 0.13 Miles south of the site. (NMOSE, Section 23, 2019 sample)

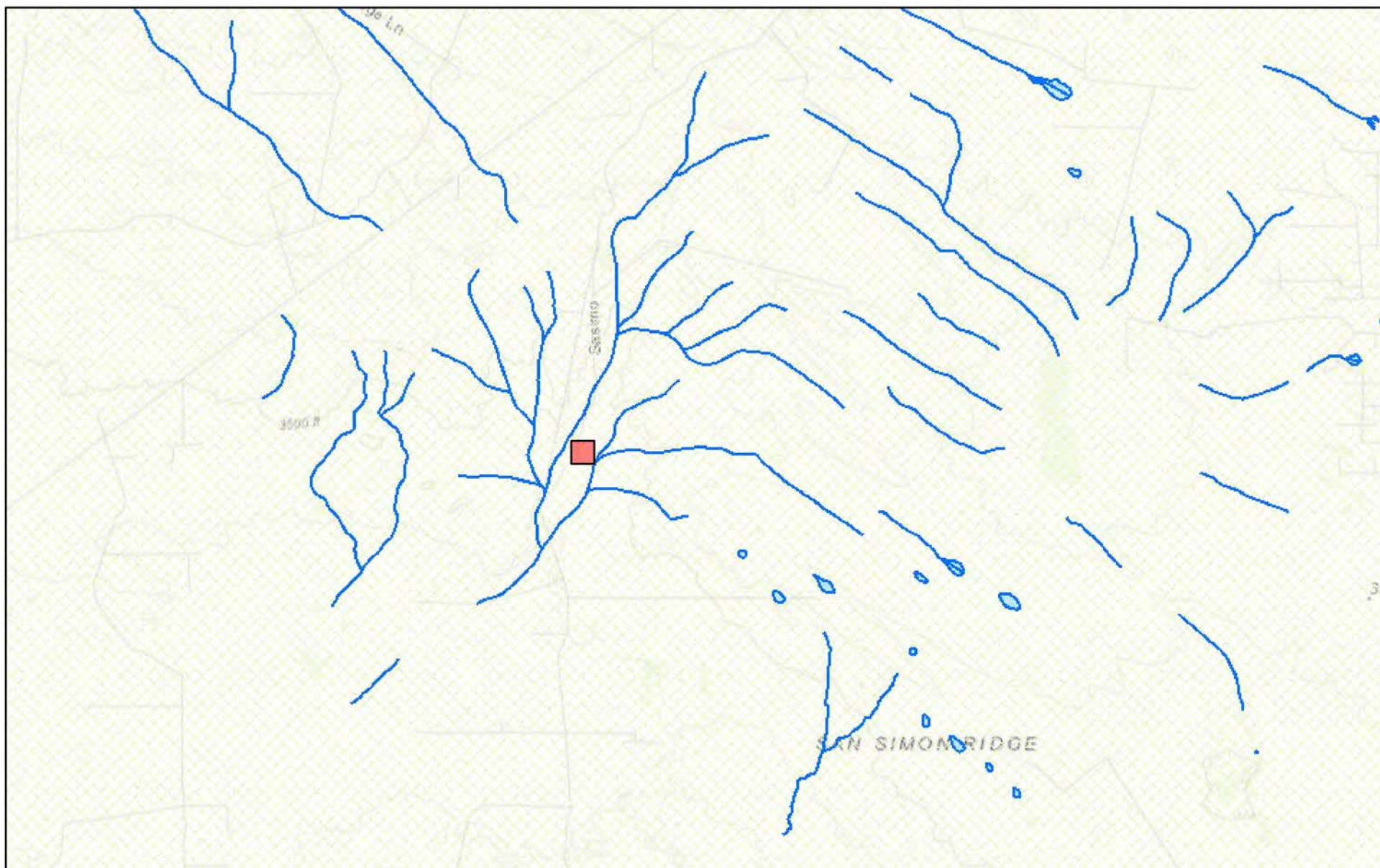
RRALs:

- 600 mg/kg Chlorides
- 100 mg/kg Total TPH
- 10 mg/kg Benzene
- 50 mg/kg Total BTEX

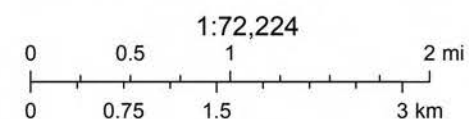
Explanation:

Due to groundwater depth measured at less than 50 ft bgs within 0.5 miles of the site, Most stringent RRALs will be followed.

New Mexico NFHL Data



January 31, 2023







FEMA, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

nmflood.org is made possible through a collaboration with NMDHSEM,

This is a non-regulatory product for informational use only. Please consult your local floodplain administrator for further information.

Chiso 14 8711 #3 Jet Pump Release

Legend

-  Chiso 14 8711 #3
-  High
-  Low
-  Medium

 Chiso 14 8711 #3

Google Earth



400 ft



[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Mapper

[Help](#) [Info](#)



Site Information



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

▼


Geographic Area:

United States

▼

GO

Click to hideNews Bulletins

- Explore the NEW [USGS National Water Dashboard](#) interactive map to access real-time water data from over 13,500 stations nationwide.
- [Full News](#) 

Groundwater levels for the Nation

 Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 322231103262601

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 322231103262601 22S.34E.23.23131

Lea County, New Mexico
Latitude 32°22'47.6", Longitude 103°26'25.3" NAD83
Land-surface elevation 3,452 feet above NAVD88
The depth of the well is 60 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
------	------	-------------------------------------	---------------------	--------------------------------------	---	---------------------------	-------------	----------------------------	-----------------------	----------------------------	----------------------------------

Date	Time	Water-level date-time accuracy	Parameter code	Water-level, feet below land surface	Water-level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
1968-06-10			D62610		3425.15	NGVD29	1	Z			A
1968-06-10			D62611		3426.75	NAVD88	1	Z			A
1968-06-10			D72019	25.25			1	Z			A
1971-09-08			D62610		3423.42	NGVD29	P	Z			A
1971-09-08			D62611		3425.02	NAVD88	P	Z			A
1971-09-08			D72019	26.98			P	Z			A
1976-12-16			D62610		3426.10	NGVD29	1	Z			A
1976-12-16			D62611		3427.70	NAVD88	1	Z			A
1976-12-16			D72019	24.30			1	Z			A
1981-03-18			D62610		3427.03	NGVD29	1	Z			A
1981-03-18			D62611		3428.63	NAVD88	1	Z			A
1981-03-18			D72019	23.37			1	Z			A
1986-04-10			D62610		3427.57	NGVD29	1	Z			A
1986-04-10			D62611		3429.17	NAVD88	1	Z			A
1986-04-10			D72019	22.83			1	Z			A
1991-05-03			D62610		3427.87	NGVD29	1	Z			A
1991-05-03			D62611		3429.47	NAVD88	1	Z			A
1991-05-03			D72019	22.53			1	Z			A
1996-02-21			D62610		3428.27	NGVD29	1	S			A
1996-02-21			D62611		3429.87	NAVD88	1	S			A
1996-02-21			D72019	22.13			1	S			A
2015-12-18	21:30 UTC		m62610		3433.01	NGVD29	1	S	USGS	S	A
2015-12-18	21:30 UTC		m62611		3434.61	NAVD88	1	S	USGS	S	A
2015-12-18	21:30 UTC		m72019	17.39			1	S	USGS	S	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet

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

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2023-01-31 15:30:35 EST

0.29 0.25 nadww01





WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

 2019 SEP 18 10:00 AM
 STATE OF NEW MEXICO
 OFFICE OF THE STATE ENGINEER

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) CP-1682-POD1 South 2		WELL TAG ID NO. 2062A		OSE FILE NO(S). CP-1682			
	WELL OWNER NAME(S) Merchant Livestock Company/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) 575-398-2424			
	WELL OWNER MAILING ADDRESS PO Box 692				CITY Tatum	STATE NM	ZIP 88267	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 22	SECONDS 59.66	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
		LONGITUDE -103	26	7.87	W	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NW1/4 NE1/4 NE1/4 Section 23, Township 22 South, Range 34 East on Merchant Livestock Company Land								
2. DRILLING & CASING INFORMATION	LICENSE NO. WD 421		NAME OF LICENSED DRILLER Corky Glenn			NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.		
	DRILLING STARTED 09/10/19	DRILLING ENDED 09/13/19	DEPTH OF COMPLETED WELL (FT) 294	BORE HOLE DEPTH (FT) 294	DEPTH WATER FIRST ENCOUNTERED (FT) 42			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 31			
	DRILLING FLUID: <input type="checkbox"/> AIR <input checked="" type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	22.5'	20"	Steel 12 3/4" OD	Plain End	12.25	.25	---
	0	294'	20"	Steel Casing 8 5/8" / 8.625" OD	Plain End	8.125	.25	1/8"
				Bottom 252 Perforated				
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	22.5'	20"	Cemented Redi Mix	Fill to Top	Top Pour		
	0	294'	20"	3/8" Veilmore Gravel	18.52 CY	Top Pour		

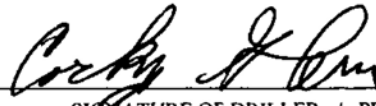
FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. CP-1682	POD NO. 1	TRN NO. 632044
LOCATION 212 Sec 23 T22S R 34E	WELL TAG ID NO. 2062A	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	6	6	Soil	Y ✓ N	
	6	9	3	Soil & Sand	Y ✓ N	
	9	16	7	Caliche	Y ✓ N	
	16	20	4	Clay & Sand	Y ✓ N	
	20	42	22	Red Clay	Y ✓ N	
	42	56	14	Brown Sandrock	✓ Y N	5.00
	56	63	7	Red Clay	Y ✓ N	
	63	68	5	White & Green Clay	Y ✓ N	
	68	92	24	Brown Sandrock	✓ Y N	9.00
	92	122	30	Red Clay	Y ✓ N	
	122	128	6	Brown Shale	Y ✓ N	
	128	165	37	Red Clay with Stringers of Brown Sandrock	Y ✓ N	
	165	187	22	Brown Shale	Y ✓ N	
	187	225	38	Red Clay & Red Shale	Y ✓ N	
	225	242	17	Brown Shale	Y ✓ N	
	242	274	32	Blue Sandrock & Shale	✓ Y N	1.00
	274	294	20	Red Shale	Y ✓ N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input checked="" type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm): 15.00	

5. TEST, RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	MISCELLANEOUS INFORMATION:	
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Travis Glenn License # 1719 (Glenn's Water Well Service, Inc.)		

6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 SIGNATURE OF DRILLER / PRINT SIGNED NAME	Corky Glenn DATE <u>9/17/19</u>

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/2017)


FILE NO. <u>CP-1682</u>	POD NO. <u>1</u>	TRN NO. <u>632044</u>
LOCATION <u>212 Sec 23 T22S R34E</u>	WELL TAG ID NO. <u>2062A</u>	PAGE 2 OF 2





Appendix C

Photographic Documentation

Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC

<p>Photo: 1</p> <p>Description:</p> <p>View of Remediation Activities – North side of the Site facing south.</p>	
--	--

<p>Photo: 2</p> <p>Description:</p> <p>View of Remediation Activities – North side of the Site facing southeast.</p>	
--	--

Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	 TETRA TECH
11/18/22- 11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page 1 of 5	BTA Oil Company	Chiso 3-4 Jet Pump Release	

Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC


Photo: 3**Description:**

View of Remediation Activities – South side of the Site facing northeast.

**Photo: 4****Description:**

View of Remediation Activities – North side of the Site facing southeast.



Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	 TETRA TECH
11/18/22- 11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page 2 of 5	BTA Oil Company	Chiso 3-4 Jet Pump Release	

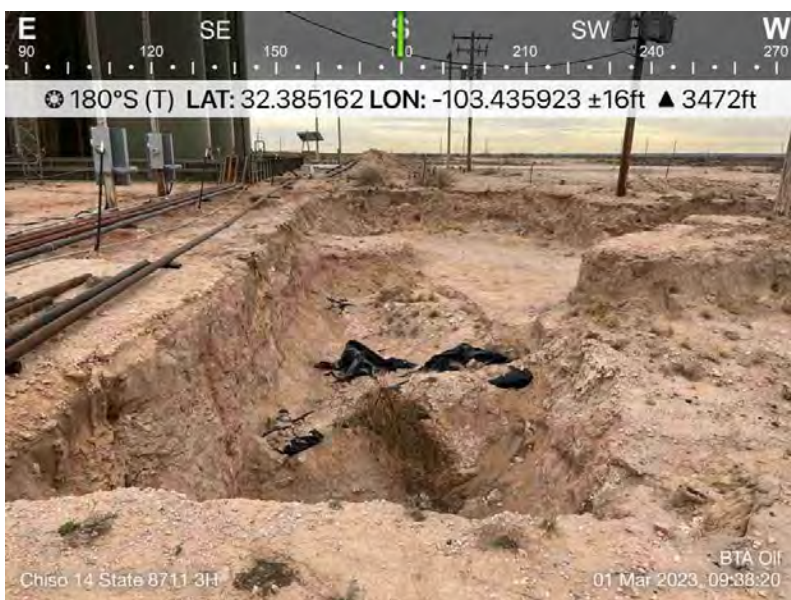
Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC


Photo: 5**Description:**

View of Remediation Activities – South side of the Site facing north.

**Photo: 6****Description:**

View of the excavation – North side of the site facing South.



Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	 TETRA TECH
11/18/22- 11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page 3 of 5	BTA Oil Company	Chiso 3-4 Jet Pump Release	

Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC


Photo: 7**Description:**

View of the excavation adjacent to the release area.

**Photo: 8****Description:**

View of the excavation – South side of the site facing north.



Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
11/18/22-11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page 4 of 5	BTA Oil Company	Chiso 3-4 Jet Pump Release	

Photographic Log
Chiso State #14 8711 3H & 4H Jet Pump Release
BTA Oil Producers, LLC


Photo: 9**Description:**

View of the excavation –
 West side of the site facing
 northeast.

**Photo: 10****Description:**

View of the excavation –
 southeast side of the site
 facing northwest.



Date Taken:	Job No.	Photographs Taken By:	Page No.	Client:	Site Name:	
11/18/22- 11/29/22	212C-MD-02963	Alves Oilfield Services/ Tetra Tech, Inc.	Page 5 of 5	BTA Oil Company	Chiso 3-4 Jet Pump Release	



Appendix D

Analytical Laboratory Reports



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

September 20, 2021

MATTHEW LONGCRIER

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO 14 STATE

Enclosed are the results of analyses for samples received by the laboratory on 09/15/21 8:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 09/15/2021
 Reported: 09/20/2021
 Project Name: CHISO 14 STATE
 Project Number: NOT GIVEN
 Project Location: BTA - JAL NM

Sampling Date: 09/14/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SURFACE (H212552-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/16/2021	ND	1.82	91.0	2.00	3.11	
Toluene*	<0.050	0.050	09/16/2021	ND	1.99	99.6	2.00	2.55	
Ethylbenzene*	<0.050	0.050	09/16/2021	ND	1.96	98.0	2.00	2.35	
Total Xylenes*	<0.150	0.150	09/16/2021	ND	5.95	99.1	6.00	2.15	
Total BTX	<0.300	0.300	09/16/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	50000	16.0	09/16/2021	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	09/17/2021	ND	225	112	200	0.847	
DRO >C10-C28*	12.9	10.0	09/17/2021	ND	226	113	200	1.40	
EXT DRO >C28-C36	<10.0	10.0	09/17/2021	ND					

Surrogate: 1-Chlorooctane 95.1 % 44.3-133

Surrogate: 1-Chlorooctadecane 91.2 % 38.9-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 09/15/2021
 Reported: 09/20/2021
 Project Name: CHISO 14 STATE
 Project Number: NOT GIVEN
 Project Location: BTA - JAL NM

Sampling Date: 09/14/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: 1' (H212552-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2021	ND	1.82	91.0	2.00	3.11		
Toluene*	<0.050	0.050	09/16/2021	ND	1.99	99.6	2.00	2.55		
Ethylbenzene*	<0.050	0.050	09/16/2021	ND	1.96	98.0	2.00	2.35		
Total Xylenes*	<0.150	0.150	09/16/2021	ND	5.95	99.1	6.00	2.15		
Total BTEx	<0.300	0.300	09/16/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2920	16.0	09/16/2021	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	09/17/2021	ND	225	112	200	0.847	
DRO >C10-C28*	<10.0	10.0	09/17/2021	ND	226	113	200	1.40	
EXT DRO >C28-C36	<10.0	10.0	09/17/2021	ND					

Surrogate: 1-Chlorooctane 88.6 % 44.3-133

Surrogate: 1-Chlorooctadecane 85.6 % 38.9-142

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 09/15/2021
 Reported: 09/20/2021
 Project Name: CHISO 14 STATE
 Project Number: NOT GIVEN
 Project Location: BTA - JAL NM

Sampling Date: 09/14/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: 2' (H212552-03)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/16/2021	ND	1.82	91.0	2.00	3.11		
Toluene*	<0.050	0.050	09/16/2021	ND	1.99	99.6	2.00	2.55		
Ethylbenzene*	<0.050	0.050	09/16/2021	ND	1.96	98.0	2.00	2.35	GC-NC	
Total Xylenes*	<0.150	0.150	09/16/2021	ND	5.95	99.1	6.00	2.15		
Total BTEx	<0.300	0.300	09/16/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 272 % 69.9-140

Chloride, SM4500CI-B			mg/kg					Analyzed By: GM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	09/16/2021	ND	432	108	400	3.77	QM-07

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	55.4	10.0	09/18/2021	ND	190	95.2	200	0.563	
DRO >C10-C28*	3080	10.0	09/18/2021	ND	198	98.8	200	0.777	QM-07
EXT DRO >C28-C36	688	10.0	09/18/2021	ND					

Surrogate: 1-Chlorooctane 96.8 % 44.3-133

Surrogate: 1-Chlorooctadecane 223 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene", written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

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

[illegible]



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

November 19, 2021

HAYES ADAMS

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO STATE

Enclosed are the results of analyses for samples received by the laboratory on 11/16/21 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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Analytical Results For:

RX-SOIL INC.
 HAYES ADAMS
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 11/16/2021
 Reported: 11/19/2021
 Project Name: CHISO STATE
 Project Number: EUNICE NM
 Project Location: BTA - EUNICE NM

Sampling Date: 11/15/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 SURFACE (H213274-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/18/2021	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane 103 % 44.3-133

Surrogate: 1-Chlorooctadecane 101 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

RX-SOIL INC.
 HAYES ADAMS
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 11/16/2021
 Reported: 11/19/2021
 Project Name: CHISO STATE
 Project Number: EUNICE NM
 Project Location: BTA - EUNICE NM

Sampling Date: 11/15/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 2' (H213274-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/18/2021	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane 80.1 % 44.3-133

Surrogate: 1-Chlorooctadecane 78.4 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

RX-SOIL INC.
HAYES ADAMS
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received: 11/16/2021
Reported: 11/19/2021
Project Name: CHISO STATE
Project Number: EUNICE NM
Project Location: BTA - EUNICE NM

Sampling Date: 11/15/2021
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 2 SURFACE (H213274-03)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33		
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85		
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73		
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76		
Total BTEx	<0.300	0.300	11/17/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.7 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	11/18/2021	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	11.1	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane 86.0 % 44.3-133

Surrogate: 1-Chlorooctadecane 84.0 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

RX-SOIL INC.
 HAYES ADAMS
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 11/16/2021
 Reported: 11/19/2021
 Project Name: CHISO STATE
 Project Number: EUNICE NM
 Project Location: BTA - EUNICE NM

Sampling Date: 11/15/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 2 2' (H213274-04)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2021	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane 86.3 % 44.3-133

Surrogate: 1-Chlorooctadecane 86.5 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

RX-SOIL INC.
 HAYES ADAMS
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 11/16/2021
 Reported: 11/19/2021
 Project Name: CHISO STATE
 Project Number: EUNICE NM
 Project Location: BTA - EUNICE NM

Sampling Date: 11/15/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 3 SURFACE (H213274-05)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.2 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2021	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane 76.3 % 44.3-133

Surrogate: 1-Chlorooctadecane 76.4 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

RX-SOIL INC.
 HAYES ADAMS
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 11/16/2021
 Reported: 11/19/2021
 Project Name: CHISO STATE
 Project Number: EUNICE NM
 Project Location: BTA - EUNICE NM

Sampling Date: 11/15/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 3 2' (H213274-06)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2200	16.0	11/18/2021	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	11/18/2021	ND	209	104	200	1.45	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	198	98.8	200	1.50	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane 89.1 % 44.3-133

Surrogate: 1-Chlorooctadecane 89.6 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

RX-SOIL INC.
 HAYES ADAMS
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 11/16/2021
 Reported: 11/19/2021
 Project Name: CHISO STATE
 Project Number: EUNICE NM
 Project Location: BTA - EUNICE NM

Sampling Date: 11/15/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 4 SURFACE (H213274-07)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEx	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	11/18/2021	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	11/18/2021	ND	201	101	200	2.96	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	223	111	200	0.335	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane 65.7 % 44.3-133

Surrogate: 1-Chlorooctadecane 62.8 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 HAYES ADAMS
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 11/16/2021
 Reported: 11/19/2021
 Project Name: CHISO STATE
 Project Number: EUNICE NM
 Project Location: BTA - EUNICE NM

Sampling Date: 11/15/2021
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 4 2' (H213274-08)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/17/2021	ND	2.22	111	2.00	8.33	
Toluene*	<0.050	0.050	11/17/2021	ND	2.11	106	2.00	7.85	
Ethylbenzene*	<0.050	0.050	11/17/2021	ND	2.09	104	2.00	7.73	
Total Xylenes*	<0.150	0.150	11/17/2021	ND	6.32	105	6.00	6.76	
Total BTEX	<0.300	0.300	11/17/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	11/18/2021	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	11/18/2021	ND	201	101	200	2.96	
DRO >C10-C28*	<10.0	10.0	11/18/2021	ND	223	111	200	0.335	
EXT DRO >C28-C36	<10.0	10.0	11/18/2021	ND					

Surrogate: 1-Chlorooctane 53.8 % 44.3-133

Surrogate: 1-Chlorooctadecane 51.3 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Asso</u>		P.O. #:		BILL TO												ANALYSIS REQUEST																									
Project Manager: <u>Hays</u>		Company:																																							
Address:		Attn:																																							
City:		State:		Zip:																																					
Phone #:		Fax #:		Address:																																					
Project #:		City:		State:		Zip:																																			
Project Name: <u>Chiso State</u>		State:		City:		Zip:																																			
Project Location: <u>Frank NM</u>		Phone #:		City:		Zip:																																			
Sample Name: <u>Om</u>		Fax #:		City:		Zip:																																			
FOR LAB USE ONLY		PRESERV		SAMPLING																																					
Lab I.D. <u>H133274</u>		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME													
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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 02, 2022

MATTHEW LONGCRIER

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO 14 STATE

Enclosed are the results of analyses for samples received by the laboratory on 03/01/22 8:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received:	03/01/2022	Sampling Date:	02/28/2022
Reported:	03/02/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - EUNICE, NM		

Sample ID: B 1 (H220775-01)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.43	
Toluene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.02	
Ethylbenzene*	<0.050	0.050	03/01/2022	ND	1.95	97.5	2.00	2.94	
Total Xylenes*	<0.150	0.150	03/01/2022	ND	6.03	100	6.00	3.18	
Total BTEX	<0.300	0.300	03/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	03/02/2022	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	03/01/2022	ND	225	112	200	7.70	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	206	103	200	8.58	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane 91.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 93.2 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Received: 03/01/2022
Reported: 03/02/2022
Project Name: CHISO 14 STATE
Project Number: NONE GIVEN
Project Location: BTA - EUNICE, NM

Sampling Date: 02/28/2022
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: B 2 (H220775-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.43		
Toluene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.02		
Ethylbenzene*	<0.050	0.050	03/01/2022	ND	1.95	97.5	2.00	2.94		
Total Xylenes*	<0.150	0.150	03/01/2022	ND	6.03	100	6.00	3.18		
Total BTEx	<0.300	0.300	03/01/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	03/02/2022	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	03/01/2022	ND	225	112	200	7.70	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	206	103	200	8.58	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane 97.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 101 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 03/01/2022
 Reported: 03/02/2022
 Project Name: CHISO 14 STATE
 Project Number: NONE GIVEN
 Project Location: BTA - EUNICE, NM

Sampling Date: 02/28/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 5 (H220775-03)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.43		
Toluene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.02		
Ethylbenzene*	<0.050	0.050	03/01/2022	ND	1.95	97.5	2.00	2.94		
Total Xylenes*	<0.150	0.150	03/01/2022	ND	6.03	100	6.00	3.18		
Total BTEx	<0.300	0.300	03/01/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	03/02/2022	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	03/01/2022	ND	225	112	200	7.70	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	206	103	200	8.58	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane 92.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 95.7 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 03/01/2022
 Reported: 03/02/2022
 Project Name: CHISO 14 STATE
 Project Number: NONE GIVEN
 Project Location: BTA - EUNICE, NM

Sampling Date: 02/28/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S 1 (H220775-04)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.43		
Toluene*	<0.050	0.050	03/01/2022	ND	2.04	102	2.00	2.02		
Ethylbenzene*	<0.050	0.050	03/01/2022	ND	1.95	97.5	2.00	2.94		
Total Xylenes*	<0.150	0.150	03/01/2022	ND	6.03	100	6.00	3.18		
Total BTEx	<0.300	0.300	03/01/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

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	03/02/2022	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	03/02/2022	ND	225	112	200	7.70	
DRO >C10-C28*	<10.0	10.0	03/02/2022	ND	206	103	200	8.58	
EXT DRO >C28-C36	<10.0	10.0	03/02/2022	ND					

Surrogate: 1-Chlorooctane 102 % 66.9-136

Surrogate: 1-Chlorooctadecane 106 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CARDINAL
Laboratories

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

CHAIN-OF-CUSTODY AND A ANALYSIS REQUEST

Page 7 of 7



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

March 01, 2022

MATTHEW LONGCRIER

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO 14 STATE

Enclosed are the results of analyses for samples received by the laboratory on 02/25/22 8:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received:	02/25/2022	Sampling Date:	02/24/2022
Reported:	03/01/2022	Sampling Type:	Soil
Project Name:	CHISO 14 STATE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA - JAL NM		

Sample ID: B 2 (H220738-01)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2022	ND	1.98	98.8	2.00	4.18	
Toluene*	<0.050	0.050	02/27/2022	ND	1.98	99.0	2.00	3.19	
Ethylbenzene*	<0.050	0.050	02/27/2022	ND	1.99	99.3	2.00	2.77	
Total Xylenes*	<0.150	0.150	02/27/2022	ND	6.13	102	6.00	2.84	
Total BTEX	<0.300	0.300	02/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	02/26/2022	ND	432	108	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/28/2022	ND	188	94.1	200	13.9	
DRO >C10-C28*	56.8	10.0	02/28/2022	ND	164	82.1	200	3.76	
EXT DRO >C28-C36	14.1	10.0	02/28/2022	ND					

Surrogate: 1-Chlorooctane 100 % 66.9-136

Surrogate: 1-Chlorooctadecane 110 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 02/25/2022
 Reported: 03/01/2022
 Project Name: CHISO 14 STATE
 Project Number: NONE GIVEN
 Project Location: BTA - JAL NM

Sampling Date: 02/24/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 4 5' (H220738-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2022	ND	1.98	98.8	2.00	4.18	
Toluene*	<0.050	0.050	02/27/2022	ND	1.98	99.0	2.00	3.19	
Ethylbenzene*	<0.050	0.050	02/27/2022	ND	1.99	99.3	2.00	2.77	
Total Xylenes*	<0.150	0.150	02/27/2022	ND	6.13	102	6.00	2.84	
Total BTX	<0.300	0.300	02/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/26/2022	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/28/2022	ND	188	94.1	200	13.9	
DRO >C10-C28*	<10.0	10.0	02/28/2022	ND	164	82.1	200	3.76	
EXT DRO >C28-C36	<10.0	10.0	02/28/2022	ND					

Surrogate: 1-Chlorooctane 105 % 66.9-136

Surrogate: 1-Chlorooctadecane 106 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 02/25/2022
 Reported: 03/01/2022
 Project Name: CHISO 14 STATE
 Project Number: NONE GIVEN
 Project Location: BTA - JAL NM

Sampling Date: 02/24/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 5 (H220738-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/27/2022	ND	1.98	98.8	2.00	4.18	
Toluene*	<0.050	0.050	02/27/2022	ND	1.98	99.0	2.00	3.19	
Ethylbenzene*	<0.050	0.050	02/27/2022	ND	1.99	99.3	2.00	2.77	
Total Xylenes*	<0.150	0.150	02/27/2022	ND	6.13	102	6.00	2.84	
Total BTEx	<0.300	0.300	02/27/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/26/2022	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/28/2022	ND	188	94.1	200	13.9	
DRO >C10-C28*	<10.0	10.0	02/28/2022	ND	164	82.1	200	3.76	
EXT DRO >C28-C36	<10.0	10.0	02/28/2022	ND					

Surrogate: 1-Chlorooctane 101 % 66.9-136

Surrogate: 1-Chlorooctadecane 106 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RSO1		BILL TO ANALYSIS REQUEST	
Project Manager: Mat			
Address:		P.O. #:	
City:	State:	Company: BTA	
Phone #:	Fax #:	Attn: Bob Hall	
Project #:		Address:	
Project Name: Chise 14 Stk		City:	
Project Location: unice nm		State:	
Sampler Name: Mat		Zip:	
FOR LAB USE ONLY		Phone #:	
Fax #:		Matrix	
Lab I.D.		PRESERV	
Sample I.D.		SAMPLING	
(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:		DATE	
		TIME	
B2 B4 B5		2/24 5:00pm 2/24 5:00pm	
Chlorides Tph Btex		X X X	

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Relinquished By: *[Signature]* **Date:** 2-25-22

Relinquished By: *[Signature]* **Date:** 2-25-22

Received By: *[Signature]* **Date:** 2-25-22

Time: 8:55

Observed Temp. °C: -4.6

Corrected Temp. °C: -7.1

Sample Condition: ☒ Intact ☐ Yes ☐ No

CHECKED BY: *[Signature]* **(Initials):** *[Signature]*

Turnaround Time: Standard ☒ **Standard:** 72hrs

Thermometer ID #113 **Correction Factor:** -0.52

Bacteria (only) Sample Condition: ☒ Intact ☐ Yes ☐ No

Observed Temp. °C: **Corrected Temp. °C:**

REMARKS:

Verbal Result: ☐ Yes ☐ No **Adm'l Phone #:**

All Results are emailed. Please provide Email address:



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

March 01, 2022

MICHAEL ALVES

ALVES OILFIELD SOLUTIONS

2215 W BENDER

HOBBS, NM 88240

RE: BTA - CHISO 3-4

Enclosed are the results of analyses for samples received by the laboratory on 02/28/22 15:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received:	02/28/2022	Sampling Date:	02/28/2022
Reported:	03/01/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	BTA		

Sample ID: SP. 2 @ 18' (H220769-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2022	ND	2.00	100	2.00	1.48	
Toluene*	<0.050	0.050	02/28/2022	ND	1.98	99.2	2.00	1.65	
Ethylbenzene*	<0.050	0.050	02/28/2022	ND	1.93	96.5	2.00	0.998	
Total Xylenes*	<0.150	0.150	02/28/2022	ND	6.00	100	6.00	0.601	
Total BTEX	<0.300	0.300	02/28/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	03/01/2022	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	03/01/2022	ND	216	108	200	4.94	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	212	106	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane 113 % 66.9-136

Surrogate: 1-Chlorooctadecane 129 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 02/28/2022
 Reported: 03/01/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 02/28/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: SP. 2 @ 19' (H220769-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/28/2022	ND	2.00	100	2.00	1.48		
Toluene*	<0.050	0.050	02/28/2022	ND	1.98	99.2	2.00	1.65		
Ethylbenzene*	<0.050	0.050	02/28/2022	ND	1.93	96.5	2.00	0.998		
Total Xylenes*	<0.150	0.150	02/28/2022	ND	6.00	100	6.00	0.601		
Total BTEx	<0.300	0.300	02/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	03/01/2022	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	03/01/2022	ND	216	108	200	4.94	
DRO >C10-C28*	<10.0	10.0	03/01/2022	ND	212	106	200	4.07	
EXT DRO >C28-C36	<10.0	10.0	03/01/2022	ND					

Surrogate: 1-Chlorooctane 113 % 66.9-136

Surrogate: 1-Chlorooctadecane 128 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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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*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: BTH

Attn: Bob Hall

Address:

City:

State:

Phone #:

Fax #:

Company Name: BTH

Project Manager: Mike Flues

Address:

City:

Phone #:

Project #:

Project Name:

Project Location: Chino 3-4

Sampler Name: Talon Long

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H220-719

1 SR. 2 @ 18'

2 SR. 2 @ 14'

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE TIME

2-28-20 11:30

2-28-20 11:40

CL
TPH
B-tex

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Relinquished By:

Signature

Date: 2/28/20
Time: 15:05
Received By: Mike Flues

Relinquished By:

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

2:10C
-0.50C
1.60C

Sample Condition
Cool ☒ Intact ☒
☐ Yes ☐ No ☐ Yes ☐ No

CHECKED BY:

Signature

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

Michael Flues@ave5oilfield.com

Signature



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

March 07, 2022

MATTHEW LONGCRIER

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: CHISO 14 STATE

Enclosed are the results of analyses for samples received by the laboratory on 03/04/22 8:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

RX-SOIL INC.
 MATTHEW LONGCRIER
 201 MAIN STREET, SUITE 1360
 FORT WORTH TX, 76102
 Fax To: NA

Received: 03/04/2022
 Reported: 03/07/2022
 Project Name: CHISO 14 STATE
 Project Number: NONE GIVEN
 Project Location: BTA - EUNICE, NM

Sampling Date: 03/03/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: B 4 (H220851-01)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/04/2022	ND	1.96	97.8	2.00	6.52	
Toluene*	<0.050	0.050	03/04/2022	ND	1.93	96.6	2.00	6.68	
Ethylbenzene*	<0.050	0.050	03/04/2022	ND	1.86	92.8	2.00	6.21	
Total Xylenes*	<0.150	0.150	03/04/2022	ND	5.81	96.9	6.00	5.66	
Total BTEx	<0.300	0.300	03/04/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	992	16.0	03/04/2022	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	03/07/2022	ND	208	104	200	1.13	
DRO >C10-C28*	<10.0	10.0	03/07/2022	ND	200	99.8	200	3.01	
EXT DRO >C28-C36	<10.0	10.0	03/07/2022	ND					

Surrogate: 1-Chlorooctane 80.3 % 66.9-136

Surrogate: 1-Chlorooctadecane 86.7 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

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



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

March 14, 2022

MICHAEL ALVES

ALVES OILFIELD SOLUTIONS

2215 W BENDER

HOBBS, NM 88240

RE: BTA - CHISO 3-4

Enclosed are the results of analyses for samples received by the laboratory on 03/11/22 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received:	03/11/2022	Sampling Date:	03/08/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	BTA - CHISO 3-4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	BTA		

Sample ID: N WALL 2 (H220990-01)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44	
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66	
Total BTEx	<0.300	0.300	03/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/12/2022	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	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane 98.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 94.1 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 03/11/2022
 Reported: 03/14/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 03/08/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BOTTOM @ 7 (H220990-02)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44		
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66		
Total BTX	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/12/2022	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	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane 102 % 66.9-136

Surrogate: 1-Chlorooctadecane 99.3 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 03/11/2022
 Reported: 03/14/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 03/09/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: N WALL 1 @ 9 (H220990-03)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44		
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66		
Total BTEX	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	03/12/2022	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	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane 105 % 66.9-136

Surrogate: 1-Chlorooctadecane 102 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 03/11/2022
 Reported: 03/14/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 03/09/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: N BOTTOM @ 14 (H220990-04)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44		
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66		
Total BTEX	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	03/12/2022	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	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane 119 % 66.9-136

Surrogate: 1-Chlorooctadecane 121 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 03/11/2022
 Reported: 03/14/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 03/09/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S WALL @ 4 (H220990-05)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44	
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66	
Total BTX	<0.300	0.300	03/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	03/12/2022	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	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane 99.8 % 66.9-136

Surrogate: 1-Chlorooctadecane 99.0 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 03/11/2022
 Reported: 03/14/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 03/10/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: W WALL @ 15-3 (H220990-06)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.96	97.8	2.00	4.44		
Toluene*	<0.050	0.050	03/11/2022	ND	1.97	98.4	2.00	5.00		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.90	94.9	2.00	5.08		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	5.92	98.6	6.00	4.66		
Total BTEX	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

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	03/12/2022	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	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane 106 % 66.9-136

Surrogate: 1-Chlorooctadecane 106 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 03/11/2022
 Reported: 03/14/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 03/10/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BOTTOM #2 @ 6 (H220990-07)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/12/2022	ND	1.96	98.2	2.00	6.36		
Toluene*	<0.050	0.050	03/12/2022	ND	1.97	98.3	2.00	7.24		
Ethylbenzene*	<0.050	0.050	03/12/2022	ND	1.89	94.5	2.00	7.24		
Total Xylenes*	<0.150	0.150	03/12/2022	ND	5.88	98.0	6.00	7.39		
Total BTEx	<0.300	0.300	03/12/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	03/12/2022	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	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane 97.3 % 66.9-136

Surrogate: 1-Chlorooctadecane 97.0 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 03/11/2022
 Reported: 03/14/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 03/10/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: W WALL @ 10-4 (H220990-08)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/12/2022	ND	1.96	98.2	2.00	6.36		
Toluene*	<0.050	0.050	03/12/2022	ND	1.97	98.3	2.00	7.24		
Ethylbenzene*	<0.050	0.050	03/12/2022	ND	1.89	94.5	2.00	7.24		
Total Xylenes*	<0.150	0.150	03/12/2022	ND	5.88	98.0	6.00	7.39		
Total BTEx	<0.300	0.300	03/12/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2400	16.0	03/12/2022	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	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane 112 % 66.9-136

Surrogate: 1-Chlorooctadecane 112 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 03/11/2022
 Reported: 03/14/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 03/10/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: W WALL @ 10-5 (H220990-09)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	2.04	102	2.00	3.42		
Toluene*	<0.050	0.050	03/11/2022	ND	2.05	102	2.00	3.58		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	2.86		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.16	103	6.00	2.49		
Total BTEx	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	976	16.0	03/12/2022	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	03/12/2022	ND	250	125	200	12.8	
DRO >C10-C28*	<10.0	10.0	03/12/2022	ND	221	111	200	1.33	
EXT DRO >C28-C36	<10.0	10.0	03/12/2022	ND					

Surrogate: 1-Chlorooctane 108 % 66.9-136

Surrogate: 1-Chlorooctadecane 107 % 59.5-142

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: **BT A**
Project Manager:

Address:

City:

State: Zip:

Phone #:

Fax #:

Project #:

Project Owner:

Project Name:

Project Location: **Chile 3-4**

Sample Name: **Miguel Gmcc**

BILL TO

P.O. #:

Company: **BT A**

Attn: **Bob Hg11**

Address:

City:

State: Zip:

Phone #:

Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	MATRIX						DATE	TIME	CL	TPIH	BTEX										
						SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :														
1	N Wall 2	X				X							3-8-22	11:35	X	X										
2	Bottom @ 7	X				X							3-8-22	3:53	X	X										
3	N Wall 2 @ 9	X				X							3-9-22	9:15	X	X										
4	N Bottom @ 14	X				X							3-9-22	11:40	X	X										
5	S Wall @ 4	X				X							3-9-22	11:51	X	X										
6	W Wall @ 15-3	X				X							3-10-22	11:30	X	X										
7	Bottom @ 2 @ 6	X				X							3-10-22	12:09	X	X										
8	W Wall @ 10-4	X				X							3-10-22	1:07	X	X										
9	W Wall @ 10-5	X				X							3-10-22	1:10	X	X										

PLEASE NOTE: Liability and claims are excluded for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. 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 consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:

Date: **3-11-22** Received By:

Relinquished By:

Date: **1205**

Received By:

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition

Cool ☒ Intact ☒

CHECKED BY: (Initials)

Phone Result: ☐ Yes ☐ No

Fax Result: ☐ Yes ☐ No

Add'l Phone #:

Add'l Fax #:

REMARKS:

Michael Alms@AlmsOilFieldSolutions.org

Push! AX Seal

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



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

May 10, 2022

MICHAEL ALVES

ALVES OILFIELD SOLUTIONS

2215 W BENDER

HOBBS, NM 88240

RE: BTA - CHISO 3-4

Enclosed are the results of analyses for samples received by the laboratory on 05/09/22 12:58.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 05/09/2022
 Reported: 05/10/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 05/09/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 4' (H221944-01)

BTX 8021B		mg/kg		Analyzed By: MS\					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2022	ND	2.14	107	2.00	6.63	
Toluene*	<0.050	0.050	05/10/2022	ND	2.10	105	2.00	6.83	
Ethylbenzene*	<0.050	0.050	05/10/2022	ND	2.06	103	2.00	7.61	
Total Xylenes*	<0.150	0.150	05/10/2022	ND	6.36	106	6.00	7.80	
Total BTX	<0.300	0.300	05/10/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

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	05/10/2022	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	05/09/2022	ND	213	107	200	10.3	
DRO >C10-C28*	<10.0	10.0	05/09/2022	ND	196	98.1	200	14.5	
EXT DRO >C28-C36	<10.0	10.0	05/09/2022	ND					

Surrogate: 1-Chlorooctane 82.3 % 66.9-136

Surrogate: 1-Chlorooctadecane 84.6 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 05/09/2022
 Reported: 05/10/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 05/09/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 2 @ 4' (H221944-02)

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/10/2022	ND	2.14	107	2.00	6.63		
Toluene*	<0.050	0.050	05/10/2022	ND	2.10	105	2.00	6.83		
Ethylbenzene*	<0.050	0.050	05/10/2022	ND	2.06	103	2.00	7.61		
Total Xylenes*	<0.150	0.150	05/10/2022	ND	6.36	106	6.00	7.80		
Total BTEx	<0.300	0.300	05/10/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	688	16.0	05/10/2022	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	05/09/2022	ND	213	107	200	10.3	
DRO >C10-C28*	<10.0	10.0	05/09/2022	ND	196	98.1	200	14.5	
EXT DRO >C28-C36	<10.0	10.0	05/09/2022	ND					

Surrogate: 1-Chlorooctane 98.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 102 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 05/09/2022
 Reported: 05/10/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 05/09/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: COMP NORTH WEST (H221944-03)

BTEX 8021B		mg/kg		Analyzed By: MS\					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2022	ND	2.14	107	2.00	6.63	
Toluene*	<0.050	0.050	05/10/2022	ND	2.10	105	2.00	6.83	
Ethylbenzene*	<0.050	0.050	05/10/2022	ND	2.06	103	2.00	7.61	
Total Xylenes*	<0.150	0.150	05/10/2022	ND	6.36	106	6.00	7.80	
Total BTEX	<0.300	0.300	05/10/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	05/10/2022	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	05/09/2022	ND	213	107	200	10.3	
DRO >C10-C28*	<10.0	10.0	05/09/2022	ND	196	98.1	200	14.5	
EXT DRO >C28-C36	<10.0	10.0	05/09/2022	ND					

Surrogate: 1-Chlorooctane 85.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 89.7 % 59.5-142

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <i>Alves Oil Solutions</i>		BILL TO		ANALYSIS REQUEST																											
Project Manager: <i>Bob Hall</i>		P.O. #:																													
Address:		Company: <i>DTA</i>																													
City:		Attn:																													
State:		Address:																													
Phone #:		City:																													
Fax #:		State:																													
Project #:		Zip:																													
Project Name:		Phone #:																													
Project Location: <i>Chico 3-4</i>		Fax #:																													
Sampler Name: <i>Haylee Richey</i>																															
FOR LAB USE ONLY																															
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV		SAMPLING																			
<i>H221944</i>								<input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER :		<input checked="" type="checkbox"/> ACID/BASE: <input type="checkbox"/> ICE / COOL <input type="checkbox"/> OTHER :																					
<i>1 SP 1 @ 4'</i>				<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>5-9-22 12:49</i>		<i>4</i>		<i>TPH</i>		<i>DTX</i>											
<i>2 SP 2 @ 4'</i>				<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>5-9-22 12:49</i>		<i>4</i>		<i>TPH</i>		<i>DTX</i>											
<i>3 COMP North west</i>				<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>1</i>		<i>5-9-22 12:49</i>		<i>4</i>		<i>TPH</i>		<i>DTX</i>											
<small>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 analysis. 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 consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</small>																															
Relinquished By: <i>Haylee Richey</i>		Date: <i>5-9-22</i>		Received By: <i>Michael Alves</i>		Time: <i>12:58</i>		Received By: <i>Michael Alves</i>		Time:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:																	
Relinquished By:		Date:		Received By:		Time:		Received By:		Time:		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																	
Delivered By: (Circle One) <i>3.32 C.O.S.C.</i>		Sample Condition		CHECKED BY:		REMARKS:																									
Sampler - UPS - Bus - Other: <i>2.82 #13</i>		<input type="checkbox"/> Cool <input type="checkbox"/> Intact		<i>go</i>		<i>Michael Alves @ Alves Oil Field Solutions .org</i>																									

* Cardinal cannot warrant chemical substance. Please fax written substance to /E721 202 2276



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

June 09, 2022

MICHAEL ALVES

ALVES OILFIELD SOLUTIONS

2215 W BENDER

HOBBS, NM 88240

RE: BTA - CHISO 3-4

Enclosed are the results of analyses for samples received by the laboratory on 06/08/22 8:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 1 (H222417-01)

BTX 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	06/08/2022	ND	2.04	102	2.00	1.90	
Toluene*	<0.050	0.050	06/08/2022	ND	2.03	101	2.00	2.20	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	1.90	94.9	2.00	1.80	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	5.90	98.4	6.00	1.87	
Total BTX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 123 % 66.9-136

Surrogate: 1-Chlorooctadecane 126 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 2 (H222417-02)

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	06/08/2022	ND	2.04	102	2.00	1.90	
Toluene*	<0.050	0.050	06/08/2022	ND	2.03	101	2.00	2.20	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	1.90	94.9	2.00	1.80	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	5.90	98.4	6.00	1.87	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500Cl-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	06/08/2022	ND	448	112	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	06/09/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/09/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/09/2022	ND					

Surrogate: 1-Chlorooctane 89.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 96.8 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 3 (H222417-03)

BTX 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	06/08/2022	ND	2.04	102	2.00	1.90	
Toluene*	<0.050	0.050	06/08/2022	ND	2.03	101	2.00	2.20	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	1.90	94.9	2.00	1.80	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	5.90	98.4	6.00	1.87	
Total BTX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 115 % 66.9-136

Surrogate: 1-Chlorooctadecane 117 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 4 (H222417-04)

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	06/08/2022	ND	2.22	111	2.00	3.99	QM-07
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEx	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 113 % 66.9-136

Surrogate: 1-Chlorooctadecane 116 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 5 (H222417-05)

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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 114 % 66.9-136

Surrogate: 1-Chlorooctadecane 114 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 6 (H222417-06)

BTX 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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 118 % 66.9-136

Surrogate: 1-Chlorooctadecane 119 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 7 (H222417-07)

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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEx	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 124 % 66.9-136

Surrogate: 1-Chlorooctadecane 124 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 8 (H222417-08)

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	06/08/2022	ND	2.22	111	2.00	3.99		
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80		
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39		
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85		
Total BTEx	<0.300	0.300	06/08/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 124 % 66.9-136

Surrogate: 1-Chlorooctadecane 125 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 9 (H222417-09)

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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEX	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 123 % 66.9-136

Surrogate: 1-Chlorooctadecane 125 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 10 (H222417-10)

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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEx	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 109 % 66.9-136

Surrogate: 1-Chlorooctadecane 112 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CS 11 (H222417-11)

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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEx	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 120 % 66.9-136

Surrogate: 1-Chlorooctadecane 122 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CBS 1 (H222417-12)

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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEx	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 122 % 66.9-136

Surrogate: 1-Chlorooctadecane 122 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CBS 2 (H222417-13)

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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEx	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 115 % 66.9-136

Surrogate: 1-Chlorooctadecane 115 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CBS 3 (H222417-14)

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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEx	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 122 % 66.9-136

Surrogate: 1-Chlorooctadecane 122 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CBS 4 (H222417-15)

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	06/08/2022	ND	2.22	111	2.00	3.99		
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80		
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39		
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85		
Total BTEx	<0.300	0.300	06/08/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/08/2022	ND	448	112	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 113 % 66.9-136

Surrogate: 1-Chlorooctadecane 114 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CBS 5 (H222417-16)

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	06/08/2022	ND	2.22	111	2.00	3.99		
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80		
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39		
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85		
Total BTEx	<0.300	0.300	06/08/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	06/08/2022	ND	432	108	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 122 % 66.9-136

Surrogate: 1-Chlorooctadecane 124 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ALVES OILFIELD SOLUTIONS
 MICHAEL ALVES
 2215 W BENDER
 HOBBS NM, 88240
 Fax To:

Received: 06/08/2022
 Reported: 06/09/2022
 Project Name: BTA - CHISO 3-4
 Project Number: NONE GIVEN
 Project Location: BTA

Sampling Date: 06/07/2022
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: CBS 6 (H222417-17)

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	06/08/2022	ND	2.22	111	2.00	3.99	
Toluene*	<0.050	0.050	06/08/2022	ND	2.19	109	2.00	4.80	
Ethylbenzene*	<0.050	0.050	06/08/2022	ND	2.12	106	2.00	3.39	
Total Xylenes*	<0.150	0.150	06/08/2022	ND	6.56	109	6.00	2.85	
Total BTEx	<0.300	0.300	06/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/08/2022	ND	432	108	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	06/08/2022	ND	201	100	200	3.70	
DRO >C10-C28*	<10.0	10.0	06/08/2022	ND	204	102	200	2.12	
EXT DRO >C28-C36	<10.0	10.0	06/08/2022	ND					

Surrogate: 1-Chlorooctane 128 % 66.9-136

Surrogate: 1-Chlorooctadecane 129 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager

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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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "C. D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Alves Direct Solution</u>		P.O. #:		BILL TO												ANALYSIS REQUEST											
Project Manager: <u>Bob Hall</u>		City:		State:		Zip:		Company: <u>BTA</u>		Attn:		Address:		City:		State:		Zip:		Phone #:		Fax #:					
Project #:		Project Owner:		Project Name:		Project Location: <u>Chico 3-4</u>		Sample Name: <u>Kylee Riley</u>		Matrix:		Preserv:		Sampling:													
FOR LAB USE ONLY																											
Lab I.D. <u>1022417</u>		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL					
1		CS 1		6 1		6/7		12:22		X		X		X		X		X		X		X					
2		CS 2		6 1		6/7		12:24		X		X		X		X		X		X		X					
3		CS 3		6 1		6/7		12:27		X		X		X		X		X		X		X					
4		CS 4		6 1		6/7		12:29		X		X		X		X		X		X		X					
5		CS 5		6 1		6/7		12:30		X		X		X		X		X		X		X					
6		CS 6		6 1		6/7		12:31		X		X		X		X		X		X		X					
7		CS 7		6 1		6/7		12:34		X		X		X		X		X		X		X					
8		CS 8		6 1		6/7		12:35		X		X		X		X		X		X		X					
9		CS 9		6 1		6/7		12:36		X		X		X		X		X		X		X					
10		CS 10		6 1		6-7-24		12:37		X		X		X		X		X		X		X					
<small>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 analysis. 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 consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</small>																											
Relinquished By: <u>Kylee Riley</u>		Date: <u>6-3-22</u>		Received By: <u>Shedrick</u>		Date: <u>6-3-22</u>		Time: <u>0830</u>		Sample Condition		Checked By: <u>SR</u>		Turnaround Time: <u>Standard</u>		Thermometer ID #113		Correction Factor -0.5°C		Bacteria (only)		Sample Condition					
Relinquished By:		Date:		Received By:		Date:		Time:		Cool Intact		(Initials)		Rush		Cool Intact		Corrected Temp. °C		Observed Temp. °C		Corrected Temp. °C					
Delivered By: (Circle One)		Observed Temp. °C: <u>-3.3°C</u>		Corrected Temp. °C: <u>-3.8°C</u>		Sample Condition		Checked By: <u>SR</u>		Turnaround Time: <u>Standard</u>		Thermometer ID #113		Correction Factor -0.5°C		Bacteria (only)		Sample Condition		Observed Temp. °C		Corrected Temp. °C					
Sampler - UPS - Bus - Other:		Corrected Temp. °C: <u>-3.8°C</u>		Sample Condition		Checked By: <u>SR</u>		Turnaround Time: <u>Standard</u>		Thermometer ID #113		Correction Factor -0.5°C		Bacteria (only)		Sample Condition		Observed Temp. °C		Corrected Temp. °C		Corrected Temp. °C					
FORM-006 R3.2 10/07/21																											

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



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



Appendix E

RxSoil Field Screening Data

Chiso 14 State Floor Samples			
Date	Sample ID	Depth	CL
24-Feb	B1	3FT	884
25-Feb	B1	4FT	144
28-Feb	B1	5FT	>2500
28-Feb	B1	7FT	1256
28-Feb	B1	9FT	356
24-Feb	B2	3FT	ND
28-Feb	B2	4FT	1107
28-Feb	B2	4.5 FT	252
24-Feb	B3	3FT	1090
25-Feb	B3	4FT	>2500
25-Feb	B3	5FT	1440
25-Feb	B3	6FT	ND
28-Feb	B3	18FT	clean
24-Feb	B4	3FT	1176
24-Feb	B4	4FT	1176
24-Feb	B4	5FT	ND
28-Feb	B4	7ft	>2500
24-Feb	B5	3FT	ND
28-Feb	B5	4FT	1256
28-Feb	B5	5FT	204
Chiso 14 State Side Wall Samples			
Date	Sample ID	Depth	CL
25-Feb	S1	SW	ND
24-Feb	S2	SW	>2500
25-Feb	S2.2	SW	>2500

Chiso 14 State Floor Samples

Date	Sample ID	Depth	CL
24-Feb	B1	3FT	884
25-Feb	B1	4FT	144
28-Feb	B1	5FT	>2500
28-Feb	B1	7FT	1256
28-Feb	B1	9FT	356
24-Feb	B2	3FT	ND
28-Feb	B2	4FT	1107
28-Feb	B2	4.5 FT	252
24-Feb	B3	3FT	1090
25-Feb	B3	4FT	>2500
25-Feb	B3	5FT	1440
25-Feb	B3	6FT	ND
28-Feb	B3	18FT	clean
24-Feb	B4	3FT	1176
24-Feb	B4	4FT	1176
24-Feb	B4	5FT	ND
28-Feb	B4	7ft	>2500
3-Mar	B4	18ft	364
24-Feb	B5	3FT	ND
28-Feb	B5	4FT	1256
28-Feb	B5	5FT	204
2-Mar	B6	3FT	812
2-Mar	B7	3FT	1432
2-Mar	B8	3FT	>2500

Chiso 14 State Side Wall Samples

Date	Sample ID	Depth	CL
25-Feb	S1	SW	ND
24-Feb	S2	SW	>2500
25-Feb	S2.2	SW	>2500
2-Mar	S3	SW	>2500
2-Mar	S4	SW	>2500





APPENDIX B

September 11, 2023, *Remediation Work Plan*



September 8, 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: Remediation Work Plan
Chiso 14 State Jet Pump and Excavation
Incident Number nAPP2205837214
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of BTA Oil Producers, LLC (BTA), has prepared this *Remediation Work Plan (RWP)* to document assessment, delineation, excavation, and soil sampling activities completed to date at the Chiso 14 State Jet Pump (Site). The purpose of the Site activities was to address impacts to soil resulting from a release of produced water at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, BTA is submitting this *RWP* for Incident Number nAPP2205837214, describing Site assessment, delineation, and excavation activities that have occurred to date and proposing additional delineation and excavation of residual total petroleum hydrocarbon (TPH) and chloride impacts in the immediate vicinity and underneath production equipment and flowlines to the maximum extent practicable (MEP).

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit P, Section 14, Township 22 South, Range 34 East, in Lea County, New Mexico (32.38511°, -103.43594°) and is associated with oil and gas exploration and production operations on New Mexico State Land Trust managed by the New Mexico State Land Office (NMSLO).

On February 22, 2022, a plug on a jet pump failed and allowed water from the supply tank to drain from the pump and proceed westward directly into an active excavation associated with a previous release. The release included approximately 165 barrels (bbls) of produced water. A vacuum truck was immediately dispatched, which recovered approximately 70 bbls of produced water. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) through the online Notice of Release (NOR) portal on February 27, 2022, and followed up on a Release Notification Form C-141 (Form C-141) on March 8, 2022. The release was assigned Incident Number nAPP2205837214.

According to a *Remediation Workplan*, prepared by Tetra Tech, Inc. (Tetra Tech) and submitted to NMOCD on May 12, 2023, the prior excavation depths ranged between 3 feet and 9 feet below ground surface (bgs). Following the February 2022 release, the previous excavation was extended to depths ranging from 3 feet to 19 feet bgs between February 28, 2022, and June 7, 2022. Following excavation activities, a 20-mil poly liner was installed over the 19-foot excavation at a depth of 13 feet bgs. Due to the presence of the jet pump, Tetra Tech proposed vertically and horizontally delineating soil around the jet pump and collecting new confirmation soil samples in the excavated area. The May 2023 *Remediation Workplan* was approved by NMOCD on June 13, 2023, and can be viewed on NMOCD's website portal.

BTA Oil Producers, LLC
Remediation Work Plan
Chiso 14 State Jet Pump and Excavation

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 less than 50 feet bgs based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well CP-1682-POD1 South 2, located approximately 0.13-miles south-southeast of the Site. The groundwater well has a reported depth to groundwater of 42 feet bgs and a total depth of 294 feet bgs. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated well records are included in Appendix A.

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, continuously flowing or significant watercourse, 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 (low 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
- TPH: 100 mg/kg
- Chloride: 600 mg/kg

CULTURAL RESOURCES SURVEYS

The excavation and liner installation were initiated prior to implementation of the Cultural Properties Protection Rule on December 1, 2022. The excavation occurred less than 30 feet from the edge of the well pad disturbance area and appears to be within the clearance buffer of the original siting. No additional cultural resource surveys were completed in connection with this release.

EXCAVATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Between June 8 and July 24, 2023, Ensolum personnel were at the Site to oversee additional confirmation sampling and excavation activities based on previous soil analytical results, field screening and visible observations documented in Tetra Tech's *Remediation Workplan*. Excavation activities were performed utilizing a track hoe and transport vehicles. To direct excavation activities, soil was screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. During excavation activities, the poly liner that was installed at 13 feet bgs was removed and is no longer present in the excavation. The excavation was completed to depths ranging from 1.5 feet to 19 feet bgs. Photographic documentation of the excavation activities is included in Appendix B.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the excavation 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. Confirmation soil samples FS01 and FS23 were collected from the floor of the excavation at depths ranging from 1.5 feet to 19 feet bgs. Confirmation soil samples SW01 and

BTA Oil Producers, LLC
Remediation Work Plan
Chiso 14 State Jet Pump and Excavation

SW22 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 19 feet bgs. The confirmation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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

Laboratory analytical results for all excavation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria except for the following floor and sidewall soil samples:

- Floor Soil Samples: FS18 and FS20 through FS23
- Sidewall Soil Samples: SW07, SW13 through SW15, SW21, and SW22

The confirmation floor and sidewall soil samples that exceeded the Closure Criteria are located within and around production equipment and pipelines on pad. Excavation of impacted soil was completed to the maximum extent practicable (MEP) without compromising the integrity of the equipment and/or pipelines as well as the safety of personnel onsite. The excavation extent and excavation soil sample locations are presented on Figure 2. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix C.

The excavation areas measured approximately 4,462 square feet in areal extent. A total of approximately 1,195 cubic yards of impacted soil were removed during all excavation activities. The impacted soil was transported and properly disposed of at the R360 Environmental Solutions in Hobbs, New Mexico.

DELINEATION ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

Since all impacted soil could not safely be excavated, areas around production equipment and pipelines needed to be fully delineated. On July 6, 2023, Ensolum returned to the Site to collect delineation soil samples. Delineation soil samples H-1 through H-6 were collected outside of the release extent, at a depth of 0.5 feet bgs, to define the lateral extent of the release. Delineation soil samples AH-1 through AH-6 were collected around the jet pump and east of the proposed deferral area to depths ranging from 1-foot to 3.5 feet bgs to define the vertical extent of impacts. All delineation soil samples were collected via hand auger and field screened for VOCs and chloride. The locations of delineation soil samples are depicted on Figure 3. Lithologic / Soil Sampling Logs are included in Appendix D describing soil encountered for each soil boring and field screening results.

Laboratory analytical results indicated all COC concentrations in lateral delineation soil samples (H-1 through H-6) were compliant with the Site Closure Criteria, confirming the lateral extent of the release to the north, east, and south of the jet pump. The chloride concentration in vertical delineation soil samples AH-2 through AH-5 exceeded the Closure Criteria at their highest field screening interval depth and terminus depths ranging from 2 feet to 3.5 feet bgs; however, advancement to greater depths was limited by refusal while utilizing a hand auger. Laboratory analytical results for vertical delineation soil sample AH-6 indicated the concentration of TPH exceeded the Closure Criteria at 2 feet bgs. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix C.

BTA Oil Producers, LLC
Remediation Work Plan
Chiso 14 State Jet Pump and Excavation

RECLAMATION PLAN

Portions of the release occurred off pad in the pasture and as such, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the off pad area 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. The following Reclamation Plan addresses reclamation of the off-pad area:

- The excavation will be backfilled with locally sourced caliche and topsoil to match surrounding grade. Approximately 1 foot of topsoil will be placed on top of the caliche to support vegetative growth within the disturbed area;
- Soil in the vicinity of the release include: poorly graded sand, fine to medium-grained with trace silt and clay;
- The backfilled areas will be seeded utilizing a weed-free seed mix designed by the NMSLO to meet reclamation standards for this region, which will be: Sandy Loam (SL) seed mixture as described in the NMSLO *Revegetation Guidelines Handbook for Southeastern New Mexico*, dated 2018;
- The seed mixture will be distributed with either a push broadcaster seed spreader, tractor operated broadcast seed spreader, and/or drill seeding method(s);
- Application of the seed mixture will be at a coverage of 10 pounds of seeds per acre of reclaimed pasture with distribution by a drilling method or 20 pounds of seeds per acre of reclaimed pasture with distribution by a broadcast method;
- If necessary, erosion control management will potentially include:
 - The placement of wattles in areas with a propensity for high run off rates;
 - Straw cover if high winds are anticipated to support moisture retention and limit wind from blowing seeds away before they have had time to germinate; and/or
 - Other erosional control best management practices (BMP) as necessary to support timely and healthy regrowth of vegetation in disturbed areas;
- Backfilling of the excavation will be completed upon approval of this *Closure Request* and prior to reseeding efforts;
- Seeding is anticipated to be completed in the Fall when temperatures and precipitation is most conducive for vegetation growth. In general, seeding should occur approximately one month after the last frost in the Spring up until approximately one month prior to the first fall frost. NMSLO has recognized the optimal time to seed is between July and early September, which will be adhered to for this Site;
- If seeding occurs outside of the 180 days approved in the current fully executed ROE Permit, a new ROE Permit will be executed prior to entering the pasture for reclamation activities;
- Annual inspections (at a minimum), will take place on the location until revegetation is consistent with local natural vegetation density. The Site will be inspected the following Spring/Fall to assess the success of regrowth. If necessary, an additional application of the NMSLO-approved pure live seed mixture will be applied as well as any needed BMPs will be installed to support growth and limit erosion;

Upon completion of revegetation, a copy of the C-103 submitted to NMOCD will also be submitted to NMSLO for final inspection and release.

BTA Oil Producers, LLC
Remediation Work Plan
Chiso 14 State Jet Pump and Excavation

PROPOSED REMEDIAL ACTIONS

Site assessment, excavation, and delineation activities were conducted at the Site to address impacted soil resulting from the February 2022 release of produced water into an existing excavation for an unrelated release. Excavation of impacted soil west of the jet pump and away from active production equipment and pipelines was completed to the MEP; however, residual TPH and chloride-impacted soil remains under and around projection equipment, pipelines, and the jet pump itself. Residual impacts have been defined laterally to the west through the excavation and to the north, east, and south from lateral delineation soil samples H-1 through H-6. The vertical extent of soil impacts appears to extend to depths ranging from 4 feet to 9 feet bgs. The areal extent of residual soil impacts is approximately 2,750 square feet, as depicted on Figure 4. Approximately 662 cubic yards of soil has been left in place due to the presence of the jet pump; however, the jet pump has recently been removed and as such, BTA proposes the following remedial actions:

- Complete vertical delineation in the vicinity of the jet pump to meet the Site Closure Criteria;
- Continue excavation of residually impacted soil beneath the former jet pump and to the MEP around active production equipment and lines;
- Complete confirmation sampling of the floor and sidewalls of the expanded excavation area on a frequency of every 200 square feet. Soil samples will be submitted for laboratory analysis of BTEX, TPH, and chloride; and
- Prepare a report detailing the actions described above within 90 days of receiving approval from NMOCD of this RWP.

Excavation of impacted soil has been completed to the MEP to date and supports mitigation of impacts at this Site. With the jet pump removed, BTA believes the remedial actions completed to-date and proposed in this RWP are protective of human health, the environment, and groundwater. As such, BTA respectfully requests approval of this RWP for remedial actions associated with Incident Number nAPP2205837214. Notifications submitted to the NMOCD are included in Appendix E and the final Form C-141 is included in Appendix F.

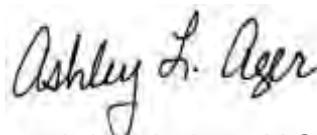
BTA Oil Producers, LLC
Remediation Work Plan
Chiso 14 State Jet Pump and Excavation

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

Sincerely,
Ensolum, LLC



Daniel R. Moir, PG
Senior Managing Geologist



Ashley L. Ager, M.S., PG
Principal

cc: Kelton Beaird, BTA
New Mexico State Land Office
Merchant Livestock Company





Appendices:

Figure 1	Site Receptor Map
Figure 2	Excavation Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	Lithologic/Soil Sampling Logs
Appendix E	NMOCD Notifications
Appendix F	Final C-141





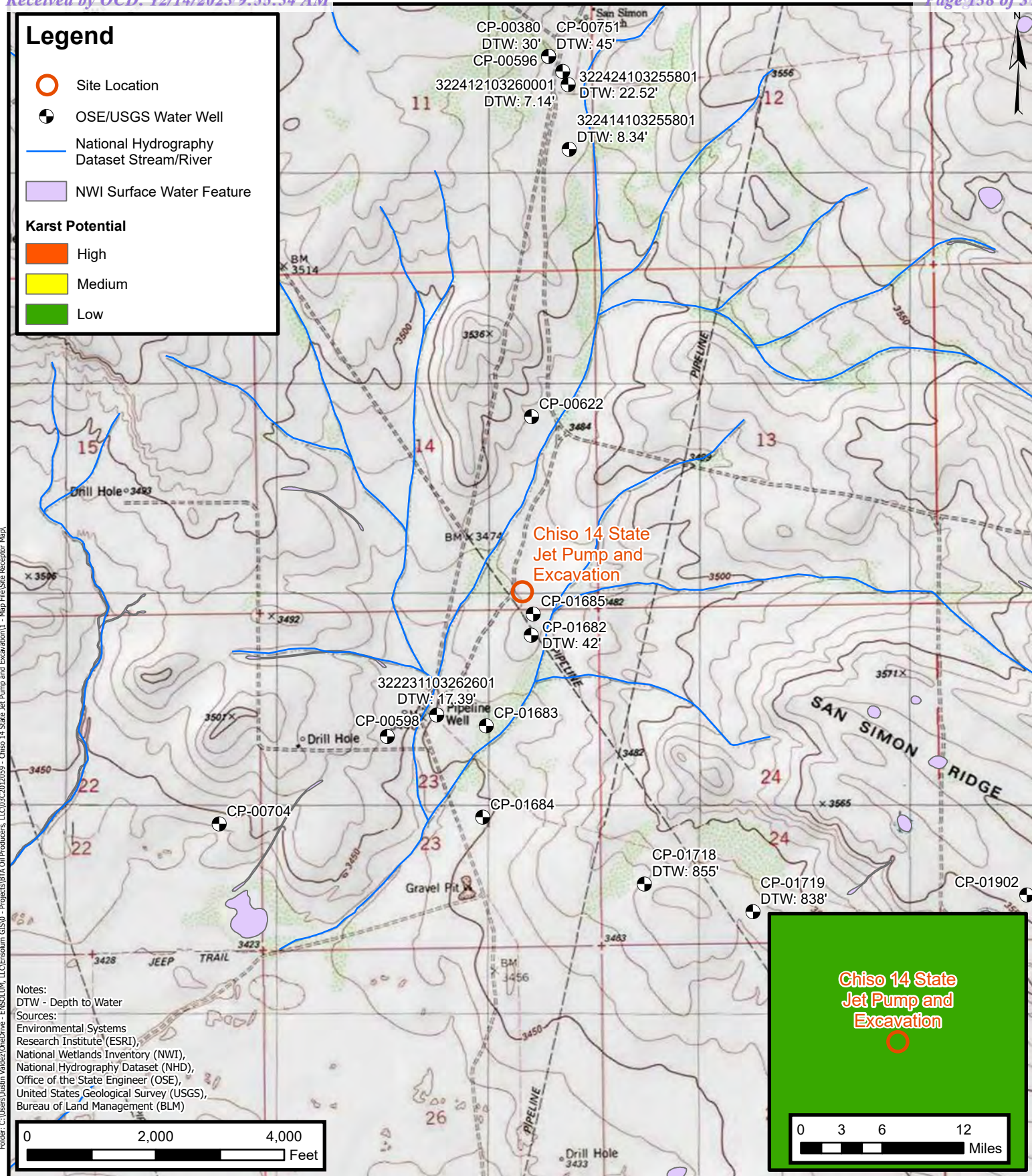
Figures

Legend

-  Site Location
-  OSE/USGS Water Well
-  National Hydrography Dataset Stream/River
-  NWI Surface Water Feature

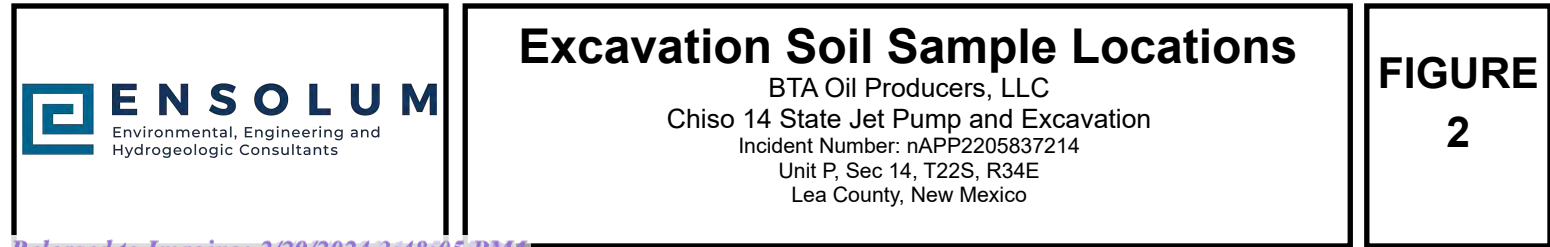
Karst Potential

-  High
-  Medium
-  Low

**Site Receptor Map**

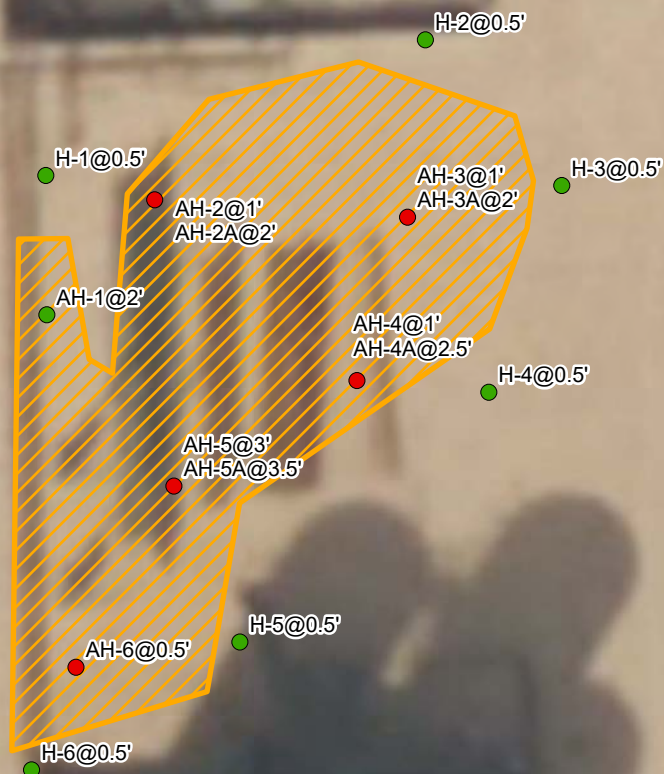
BTA Oil Producers, LLC
Chiso 14 State Jet Pump and Excavation
Incident Number: nAPP2205837214
Unit P, Sec 14, T22S, R34E
Lea County, New Mexico

FIGURE**1**



Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Exceeding Closure Criteria
- Release Extent



Notes:
Sample ID @ Depth Below Ground Surface.

0 12.5 25
Feet

Sources: Environmental Systems Research Institute (ESRI)



Delineation Soil Sample Locations

BTA Oil Producers, LLC
Chiso 14 State Jet Pump Excavation
Incident Number: nAPP2205837214
Unit P, Sec 14, T22S, R34E
Lea County, New Mexico

FIGURE

4



Table



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Chiso 14 State Jet Pump and Excavation
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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Confirmation Soil Samples										
FS01	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS02	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS03	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS04	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS05	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS06	06/13/2023	7	<0.050	<0.300	<10.0	860	204	860	1,064	32.0
FS06A	07/12/2023	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS07	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS08	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS09	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS10	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS11	06/13/2023	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS12	06/13/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS13	06/13/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS14	06/13/2023	19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
FS15	06/13/2023	19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FS16	06/13/2023	19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
FS17	06/13/2023	19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS18	06/13/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	10,400
FS19	06/13/2023	1.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS20	06/13/2023	1.5	<0.050	<0.300	<10.0	359	97.0	359	456	400
FS21	06/13/2023	1.5	<0.050	<0.300	<10.0	25.6	<10.0	25.6	25.6	736
FS22	07/27/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	7,330
FS23	07/24/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,170



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Chiso 14 State Jet Pump and Excavation
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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
SW01	06/13/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW02	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW03	06/13/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW04	06/13/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW05	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW06	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SW07	06/12/2023	0-4	<0.050	<0.300	<10.0	176	38.6	176	215	1,340
SW08	06/12/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SW09	06/12/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SW10	06/12/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SW11	06/13/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW12	06/12/2023	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW13	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,120
SW14	06/12/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,920
SW15	06/12/2023	4-9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	688
SW16	06/12/2023	14-19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW17	06/12/2023	9-14	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SW18	06/12/2023	4-9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW19	06/12/2023	14-19	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW20	06/12/2023	9-14	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW21	07/31/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	18,000
SW22	07/31/2023	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	11,600



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Chiso 14 State Jet Pump and Excavation
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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
AH-1	07/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
AH-2	07/06/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	9,600
AH-2A	07/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,440
AH-3	07/06/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,520
AH-3A	07/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,080
AH-4	07/06/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,840
AH-4A	07/06/2023	2.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,440
AH-5	07/06/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,130
AH-5A	07/06/2023	3.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,560
AH-6	07/06/2023	2	<0.050	<0.300	<10.0	115	20.8	115	136	96.0
H-1	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
H-2	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
H-3	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
H-4	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
H-5	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
H-6	07/06/2023	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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



APPENDIX A

Well Log Record



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

2019 SEP 10 10:00 AM
STATE
ENGINEER
OFFICE

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) CP-1682-POD1 South 2		WELL TAG ID NO. 2062A		OSE FILE NO(S). CP-1682			
	WELL OWNER NAME(S) Merchant Livestock Company/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) 575-398-2424			
	WELL OWNER MAILING ADDRESS PO Box 692				CITY Tatum	STATE NM	ZIP 88267	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 22	SECONDS 59.66	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE -103	26	7.87	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NW1/4 NE1/4 NE1/4 Section 23, Township 22 South, Range 34 East on Merchant Livestock Company Land								
2. DRILLING & CASING INFORMATION	LICENSE NO. WD 421		NAME OF LICENSED DRILLER Corky Glenn			NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.		
	DRILLING STARTED 09/10/19	DRILLING ENDED 09/13/19	DEPTH OF COMPLETED WELL (FT) 294	BORE HOLE DEPTH (FT) 294	DEPTH WATER FIRST ENCOUNTERED (FT) 42			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 31			
	DRILLING FLUID: <input type="checkbox"/> AIR <input checked="" type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	22.5'	20"	Steel 12 3/4" OD	Plain End	12.25	.25	---
	0	294'	20"	Steel Casing 8 5/8" / 8.625" OD	Plain End	8.125	.25	1/8"
				Bottom 252 Perforated				
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	22.5'	20"	Cemented Redi Mix	Fill to Top	Top Pour		
	0	294'	20"	3/8" Veilmore Gravel	18.52 CY	Top Pour		

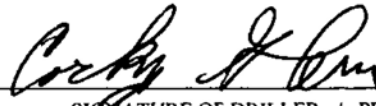
FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. CP-1682	POD NO. 1	TRN NO. 632044
LOCATION 212 Sec 23 T22S R 34E	WELL TAG ID NO. 2062A	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	6	6	Soil	Y ✓ N	
	6	9	3	Soil & Sand	Y ✓ N	
	9	16	7	Caliche	Y ✓ N	
	16	20	4	Clay & Sand	Y ✓ N	
	20	42	22	Red Clay	Y ✓ N	
	42	56	14	Brown Sandrock	✓ Y N	5.00
	56	63	7	Red Clay	Y ✓ N	
	63	68	5	White & Green Clay	Y ✓ N	
	68	92	24	Brown Sandrock	✓ Y N	9.00
	92	122	30	Red Clay	Y ✓ N	
	122	128	6	Brown Shale	Y ✓ N	
	128	165	37	Red Clay with Stringers of Brown Sandrock	Y ✓ N	
	165	187	22	Brown Shale	Y ✓ N	
	187	225	38	Red Clay & Red Shale	Y ✓ N	
	225	242	17	Brown Shale	Y ✓ N	
	242	274	32	Blue Sandrock & Shale	✓ Y N	1.00
	274	294	20	Red Shale	Y ✓ N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input checked="" type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm): 15.00	

5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	MISCELLANEOUS INFORMATION:	
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Travis Glenn License # 1719 (Glenn's Water Well Service, Inc.)		

6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 SIGNATURE OF DRILLER / PRINT SIGNED NAME	Corky Glenn DATE 9/17/19

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. CP-1682	POD NO. 1	TRN NO. 632044
LOCATION 212 Sec 23 T22S R34E	WELL TAG ID NO. 2062A	PAGE 2 OF 2



APPENDIX B

Photographic Log

**Photographic Log**

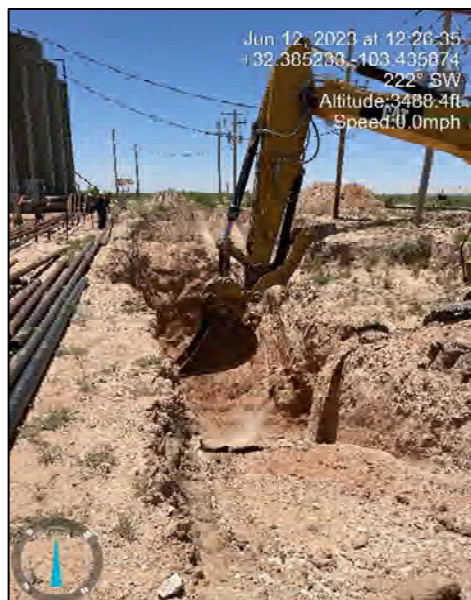
BTA Oil Producers, LLC

Chiso 14 State Jet Pump and Excavation

nAPP2205837214



Photograph: 1 Date: 5/24/2023
Description: Existing excavation prior to sloping
View: North



Photograph: 2 Date: 6/12/2023
Description: Soil sampling on sidewalls of excavation
View: Southeast



Photograph: 3 Date: 6/13/2023
Description: Excavation post sloping and sampling
View: North



Photograph: 4 Date: 7/6/2023
Description: Existing excavation on pad
View: North



APPENDIX C

Laboratory Analytical Reports & Chain-of-Custody Documentation



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

July 17, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: CHISO 14 STATE JET PUMP EXCAVATION

Enclosed are the results of analyses for samples received by the laboratory on 07/12/23 12:30.

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/12/2023	Sampling Date:	07/12/2023
Reported:	07/17/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.38511-103.43594		

Sample ID: AH - 3B 3' (H233555-01)

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2023	ND	1.99	99.5	2.00	1.53	
Toluene*	<0.050	0.050	07/13/2023	ND	1.99	99.3	2.00	1.32	
Ethylbenzene*	<0.050	0.050	07/13/2023	ND	1.99	99.4	2.00	1.23	
Total Xylenes*	<0.150	0.150	07/13/2023	ND	5.87	97.8	6.00	1.40	
Total BTX	<0.300	0.300	07/13/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	07/13/2023	ND	416	104	400	7.41	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2023	ND	213	106	200	0.650	
DRO >C10-C28*	<10.0	10.0	07/14/2023	ND	206	103	200	2.60	
EXT DRO >C28-C36	<10.0	10.0	07/14/2023	ND					

Surrogate: 1-Chlorooctane 99.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/12/2023	Sampling Date:	07/12/2023
Reported:	07/17/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.38511-103.43594		

Sample ID: AH - 4B 3.5' (H233555-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/13/2023	ND	1.99	99.5	2.00	1.53		
Toluene*	<0.050	0.050	07/13/2023	ND	1.99	99.3	2.00	1.32		
Ethylbenzene*	<0.050	0.050	07/13/2023	ND	1.99	99.4	2.00	1.23		
Total Xylenes*	<0.150	0.150	07/13/2023	ND	5.87	97.8	6.00	1.40		
Total BTEx	<0.300	0.300	07/13/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	07/13/2023	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2023	ND	213	106	200	0.650	
DRO >C10-C28*	<10.0	10.0	07/14/2023	ND	206	103	200	2.60	
EXT DRO >C28-C36	<10.0	10.0	07/14/2023	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.9 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/12/2023	Sampling Date:	07/12/2023
Reported:	07/17/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.38511-103.43594		

Sample ID: AH - 5B 4.5' (H233555-03)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/13/2023	ND	1.99	99.5	2.00	1.53		
Toluene*	<0.050	0.050	07/13/2023	ND	1.99	99.3	2.00	1.32		
Ethylbenzene*	<0.050	0.050	07/13/2023	ND	1.99	99.4	2.00	1.23		
Total Xylenes*	<0.150	0.150	07/13/2023	ND	5.87	97.8	6.00	1.40		
Total BTEx	<0.300	0.300	07/13/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	07/13/2023	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2023	ND	213	106	200	0.650	
DRO >C10-C28*	<10.0	10.0	07/14/2023	ND	206	103	200	2.60	
EXT DRO >C28-C36	<10.0	10.0	07/14/2023	ND					

Surrogate: 1-Chlorooctane 91.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.2 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

BILL TO

ANALYSIS REQUEST

Project Manager: Heather Green

P.O. #:

Address: 3122 Nat'l Parks Hwy

Company: BTA Oil

City: Carlsbad

State: NM Zip: 88230

Attn: Kerton Beaird

Phone #: 432-557-8895 Fax #:

Address: 104 S. Peers St

Project #: 03C2012-059 Project Owner:

City: Midland

Project Name: Chislo 14 State 2nd Pump

State: TX Zip: 79701

Project Location: 32.38511, -103.43594

Phone #:

Sampler Name: Meredith Roberts

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER:

ACID/BASE:

ICE / COOL

OTHER:

DATE

TIME

BTEX

Chlorides

TPH

1 AH-3B
2 AH-4B
3 AH-5B

3'
3.5'
4.5'

↓
↓
↓

X

X

7/1/23

1050
1045
1015

X

X

X

NR

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Relinquished By:

Date: 7-12-23

Received By:

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

Relinquished By:

Date:

Received By:

REMARKS:

Incident # : APP2205237214

Delivered By: (Circle One)

Observed Temp. °C 28

Sample Condition Cool Intact ☒ Yes ☐ No

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush ☒

Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ No

Observed Temp. °C Corrected Temp. °C

Sampler - UPS - Bus - Other:

Corrected Temp. °C

Thermometer ID #1754140

Correction Factor 0.00

470-711/23

No

No

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



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

June 20, 2023

TACOMA MORRISSEY

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: CHISO 14 STATE JET PUMP EXCAVATION

Enclosed are the results of analyses for samples received by the laboratory on 06/14/23 13:45.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 01 7' (H233049-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8	
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54	
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48	
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26	
Total BTX	<0.300	0.300	06/16/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 02 7' (H233049-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEx	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 03 7' (H233049-03)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 04 7' (H233049-04)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 05 7' (H233049-05)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 06 7' (H233049-06)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	ND	416	104	400	3.77		

TPH 8015M	mg/kg		Analyzed 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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	860	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	204	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 152 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 07 7' (H233049-07)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/19/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/19/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/19/2023	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 08 7' (H233049-08)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-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	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 09 7' (H233049-09)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/17/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 91.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 10 7' (H233049-10)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/17/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 89.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received: 06/14/2023
Reported: 06/20/2023
Project Name: CHISO 14 STATE JET PUMP EXCAVATION
Project Number: 03C2012059
Project Location: BTA 32.38511-103.43594

Sampling Date: 06/13/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Shalyn Rodriguez

Sample ID: FS 11 7' (H233049-11)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859	
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30	
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29	
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30	
Total BTEX	<0.300	0.300	06/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 12 4' (H233049-12)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/16/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/16/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/16/2023	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 137 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 13 4' (H233049-13)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-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	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 94.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 14 19' (H233049-14)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 83.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 15 19' (H233049-15)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 129 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 16 19' (H233049-16)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859	
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30	
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29	
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30	
Total BTEX	<0.300	0.300	06/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 128 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 17 19' (H233049-17)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859	
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30	
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29	
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30	
Total BTEX	<0.300	0.300	06/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 71.5-134

Chloride, SM4500Cl-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	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 18 1.5' (H233049-18)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10400	16.0	06/15/2023	ND	416	104	400	0.00	QM-07, QR-03	

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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 19 1.5' (H233049-19)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 20 1.5' (H233049-20)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	359	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	97.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 143 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 21 1.5' (H233049-21)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEx	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	736	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	25.6	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 99.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 01 0-4' (H233049-22)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEx	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 99.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 02 0-4' (H233049-23)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859	
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30	
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29	
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30	
Total BTX	<0.300	0.300	06/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 85.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 03 0-4' (H233049-24)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 97.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 04 0-4' (H233049-25)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 88.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 05 0-4' (H233049-26)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 82.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.3 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 06 0-4' (H233049-27)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859	
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30	
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29	
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30	
Total BTEX	<0.300	0.300	06/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 96.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 07 0-4' (H233049-28)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1340	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	176	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	38.6	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 78.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 08 4-7' (H233049-29)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.1 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 09 4-7' (H233049-30)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 87.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.5 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 10 4-7' (H233049-31)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 71.5-134

Chloride, SM4500Cl-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	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 83.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 11 4-7' (H233049-32)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 89.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.0 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 12 4-7' (H233049-33)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 74.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 13 0-4' (H233049-34)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7	
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79	
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19	
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82	
Total BTX	<0.300	0.300	06/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 75.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.7 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 14 0-4' (H233049-35)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEx	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1920	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 15 4-9' (H233049-36)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7	
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79	
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19	
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82	
Total BTX	<0.300	0.300	06/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 78.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.1 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 16 14-19' (H233049-37)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7	
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79	
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19	
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82	
Total BTEX	<0.300	0.300	06/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 79.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 17 9-14' (H233049-38)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/15/2023	ND	432	108	400	0.00	QR-03	

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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 18 4-9' (H233049-39)

BTEX 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26		
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54		
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND						

Surrogate: 1-Chlorooctane 98.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 19 14-19' (H233049-40)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 78.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.8 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 20 9-14' (H233049-41)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 81.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.3 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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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.
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.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

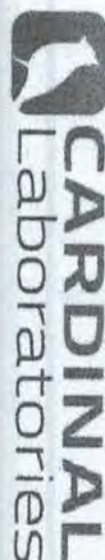
Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

PAGE 1 OF 5

Company Name: Ensolum, LLC				BILL TO				ANALYSIS REQUEST							
Project Manager: Tacoma Morrissey				P.O. #:											
Address: 3122 Nat'l Parks Hwy				Company: BTA Oil											
City: Carlsbad				Attn: Kelton Beard											
Phone #: 337-257-8307 Fax #:				Address: 104 S. Recas St											
Project #: 03C2012059 Project Owner:				City: Midland											
Project Name: Chise 14 State Jet Pump Excavation				State: TX Zip: 79701											
Project Location: 3A.38511, -103.43594				Phone #:											
Sampler Name: Meredith Roberts				Fax #:											
FOR LAB USE ONLY															
Lab I.D.		Sample I.D.		Depth (feet)		MATRIX						PRESERV.		SAMPLING	
						(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :									
Date		Time		DATE		TIME		BTEX		Chlorides		TPH			
6/14/03		1345		6/13/23		1235		X		X		X			
FSO1		T'		C		X									
FSO2															
FSO3															
FSO4															
FSO5															
FSO6															
FSO7															
FSO8															
FSO9															
FS10															

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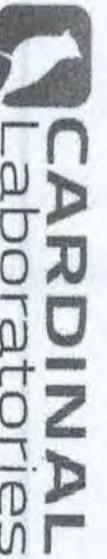
Relinquished By: [Signature] **Date:** 6/14/03 **Received By:** [Signature] **Date:** 6/14/03

Relinquished By: [Signature] **Date:** 6/14/03 **Received By:** [Signature] **Date:** 6/14/03

Delivered By: (Circle One) Observed Temp.: -1.4 °C Sample Condition: Cool Intact Yes No CHECKED BY: [Signature]

Turnaround Time: Standard Rush Bacteria (only) Sample Condition: Cool Intact Yes No Corrected Temp.: °C

Remarks: Incident #: NAPP2205837214



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: See Pg 1

Address:

City:

Phone #:

Project #:

Project Name:

Project Location:

Sampler Name:

P.O. #:

Company: BTA Oil

Attn: See Pg 1

Address:

City:

State:

Phone #:

Fax #:

PAGE 2 of 5
ANALYSIS REQUEST

BILL TO

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.		MATRIX			PRESERV.		SAMPLING											
			# CONTAINERS		GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	Chlorides	TPH			
H233049	FS11	7'	C	1			X							4/13/23	1325	X	X	X			
	FS12	4'													1330						
	FS13	4'													1335						
	FS14	19'													1340						
	FS15														1345						
	FS16														1350						
	FS17														1355						
	FS18	1.5'													1215						
	FS19														1220						
	FS20														1230						

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Relinquished By:

Date: 4/14/23

Received By:

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

All Results are emailed. Please provide Email address:

Relinquished By:

Date: 4/13/23

Received By:

REMARKS: See Pg 1

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp.: -1.4
Corrected Temp.: -2.0

Sample Condition
Cool ☒ Intact
Yes ☒ No ☐

CHECKED BY: (initials)

Turnaround Time: Standard ☒ Rush ☐

Bacteria (only) Sample Condition
Cool ☒ Intact
Yes ☒ No ☐

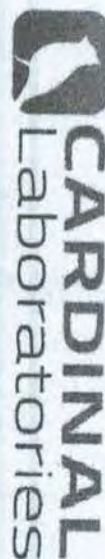
FORM-000 REV. 10/07/12

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



PAGE 3 OF 5

Page 46 of 48



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

PAGE 4 OF 5

Company Name: Ensolum, LLC		BILL TO		ANALYSIS REQUEST			
Project Manager: See Pg 1	P.O. #:						
Address:	Company: BTA-Oil						
City:	Attn: See Pg 1						
State:	Address:						
Zip:	City:						
Phone #:	State:						
Fax #:	Phone #:						
Project #: 03C2012059	Project Owner:						
Project Name: Chiso 14 State Jet Pump Excavation	State: Nj						
Project Location: 32.38511, -163.43594	City:						
Sampler Name: Meredith Robert	Fax #:						
FOR LAB USE ONLY							
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING
H233049	SW10	4-7'	C	1	X	SOIL	DATE TIME
31	SW11	↓			X	ICE / COOL	6/12/23 1445
32	SW12	0-4'				OTHER :	6/13/23 1210
33	SW13	↓					6/13/23 1450
34	SW14	4-9'					1305
35	SW15	14-19'					1330
36	SW16	9-14'					1335
37	SW17	4-9'					1340
38	SW18	14-19'					1345
39	SW19						1350
40	SW19						1355
<p>PLEASE NOTE: Liability and Damages. Cardinal's liability and clients exclusive remedy for any claim arising whether based in contract or tort shall be limited to the amount paid by the client for the analysis. 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 consequential damages, including without limitation, business interruptions, loss of time, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>							
Relinquished By: [Signature]	Date: 6/14/23	Received By: [Signature]					
Time: 1345	Date:	Received By:					
Relinquished By:	Date:	Received By:					
Time:	Date:	Received By:					
Delivered By: (Circle One)	Observed Temp. °C	Sample Condition	CHECKED BY:	Turnaround Time:	Standard	Bacteria (only)	Sample Condition
UPS - Bus - Other:	-1.4	Cool Intact Yes No	[Signature]	Rush	Yes No	Cool Intact Yes No	Observed Temp. °C
	Corrected Temp. °C = 2.0						Corrected Temp. °C
REMARKS: See Pg 1 Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: _____ All Results are emailed. Please provide Email address: _____							



PAGE 5 OF 5

Page 48 of 48



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

July 13, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: CHISO 14 STATE JET PUMP EXCAVATION

Enclosed are the results of analyses for samples received by the laboratory on 07/12/23 12:30.

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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Analytical Results For:

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

Received:	07/12/2023	Sampling Date:	07/12/2023
Reported:	07/13/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 06 A 8' (H233554-01)

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/12/2023	ND	1.82	91.0	2.00	0.314	
Toluene*	<0.050	0.050	07/12/2023	ND	1.81	90.4	2.00	1.01	
Ethylbenzene*	<0.050	0.050	07/12/2023	ND	1.79	89.4	2.00	0.0992	
Total Xylenes*	<0.150	0.150	07/12/2023	ND	5.44	90.6	6.00	0.976	
Total BTX	<0.300	0.300	07/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/13/2023	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/13/2023	ND	205	103	200	5.13	
DRO >C10-C28*	<10.0	10.0	07/13/2023	ND	222	111	200	6.09	
EXT DRO >C28-C36	<10.0	10.0	07/13/2023	ND					

Surrogate: 1-Chlorooctane 98.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

July 31, 2023

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: CHISO 14 STATE JET PUMP

Enclosed are the results of analyses for samples received by the laboratory on 07/24/23 12:35.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/24/2023
 Reported: 07/31/2023
 Project Name: CHISO 14 STATE JET PUMP
 Project Number: 03C2012059
 Project Location: BTA (32.38511-103.43594)

Sampling Date: 07/24/2023
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: FS 22 4' (H233846-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2023	ND	1.96	98.2	2.00	6.04	
Toluene*	<0.050	0.050	07/28/2023	ND	2.07	103	2.00	2.52	
Ethylbenzene*	<0.050	0.050	07/28/2023	ND	2.05	102	2.00	6.01	
Total Xylenes*	<0.150	0.150	07/28/2023	ND	6.17	103	6.00	7.34	
Total BTX	<0.300	0.300	07/28/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7330	16.0	07/26/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2023	ND	195	97.6	200	11.6	
DRO >C10-C28*	<10.0	10.0	07/27/2023	ND	216	108	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/27/2023	ND					

Surrogate: 1-Chlorooctane 91.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/24/2023
 Reported: 07/31/2023
 Project Name: CHISO 14 STATE JET PUMP
 Project Number: 03C2012059
 Project Location: BTA (32.38511-103.43594)

Sampling Date: 07/24/2023
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: FS 23 4' (H233846-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/28/2023	ND	1.96	98.2	2.00	6.04		
Toluene*	<0.050	0.050	07/28/2023	ND	2.07	103	2.00	2.52		
Ethylbenzene*	<0.050	0.050	07/28/2023	ND	2.05	102	2.00	6.01		
Total Xylenes*	<0.150	0.150	07/28/2023	ND	6.17	103	6.00	7.34		
Total BTEx	<0.300	0.300	07/28/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1170	16.0	07/26/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2023	ND	195	97.6	200	11.6	
DRO >C10-C28*	<10.0	10.0	07/27/2023	ND	216	108	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/27/2023	ND					

Surrogate: 1-Chlorooctane 88.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.4 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/24/2023
 Reported: 07/31/2023
 Project Name: CHISO 14 STATE JET PUMP
 Project Number: 03C2012059
 Project Location: BTA (32.38511-103.43594)

Sampling Date: 07/24/2023
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SW 21 0-4' (H233846-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2023	ND	1.96	98.2	2.00	6.04	
Toluene*	<0.050	0.050	07/28/2023	ND	2.07	103	2.00	2.52	
Ethylbenzene*	<0.050	0.050	07/28/2023	ND	2.05	102	2.00	6.01	
Total Xylenes*	<0.150	0.150	07/28/2023	ND	6.17	103	6.00	7.34	
Total BTEx	<0.300	0.300	07/28/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	18000	16.0	07/26/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2023	ND	195	97.6	200	11.6	
DRO >C10-C28*	<10.0	10.0	07/27/2023	ND	216	108	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/27/2023	ND					

Surrogate: 1-Chlorooctane 90.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/24/2023
 Reported: 07/31/2023
 Project Name: CHISO 14 STATE JET PUMP
 Project Number: 03C2012059
 Project Location: BTA (32.38511-103.43594)

Sampling Date: 07/24/2023
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SW 22 0-4' (H233846-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2023	ND	1.96	98.2	2.00	6.04	
Toluene*	<0.050	0.050	07/28/2023	ND	2.07	103	2.00	2.52	
Ethylbenzene*	<0.050	0.050	07/28/2023	ND	2.05	102	2.00	6.01	
Total Xylenes*	<0.150	0.150	07/28/2023	ND	6.17	103	6.00	7.34	
Total BTEx	<0.300	0.300	07/28/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11600	16.0	07/26/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2023	ND	195	97.6	200	11.6	
DRO >C10-C28*	<10.0	10.0	07/27/2023	ND	216	108	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/27/2023	ND					

Surrogate: 1-Chlorooctane 90.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories

*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "C. D. Keene", written over a horizontal line.


Celey D. Keene, Lab Director/Quality Manager





APPENDIX D


Lithologic / Soil Sampling Logs


								Sample Name: AH-1		Date: 7/6/2023	
								Site Name: Chiso 14 State Jet Pump			
								Incident Number: nAPP2205837214			
								Job Number: 03C2012059			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR		Method: Hand Auger	
Coordinates: 32.385084, -103.435850								Hole Diameter: 4"		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included in all chloride screenings.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0		0-1.5' bgs PREVIOUSLY EXCAVATED			
						1					
							SP	1.5-2' SAND with trace silt, Medium to dark brown, medium grained, poorly sorted, no stain/odor, moist.			
M	280	0.7	N	AH-1	2	2	TD	Total Depth @ 2' bgs; auger refusal			

								Sample Name: AH-2		Date: 7/6/2023	
								Site Name: Chiso 14 State Jet Pump			
								Incident Number: nAPP2205837214			
								Job Number: 03C2012059			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR		Method: Hand Auger	
Coordinates: 32.385116, -103.435813								Hole Diameter: 4"		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included in all chloride screenings.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	14,476	3.2	N	AH-2	1	1	SP	1-2' SAND with trace silt, dark brown, poorly sorted, medium to fine grained, no stain/odor, moist.			
M	3,589.6	1.3	N	AH-2A	2	2	TD	Total Depth @ 2' bgs; auger refusal			

								Sample Name: AH-3		Date: 7/6/2023	
								Site Name: Chiso 14 State Jet Pump			
								Incident Number: nAPP2205837214			
								Job Number: 03C2012059			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR		Method: Hand Auger	
Coordinates: 32.385110, -103.435728								Hole Diameter: 4"		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included in all chloride screenings.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	2,872.8	2.6	N	AH-3	1	0	CCHE	0-1' CALICHE, red/ brown, poorly sorted, sub-rounded grains, medium grained, no stain/odor, moist.			
M	2,178.4	1.1	N	AH-3A	2	1	SP	1-2' SAND with trace silt, dark to medium brown, poorly sorted, medium grained, no stain/odor, moist.			
						2		Total Depth @ 2' bgs; auger refusal			
						TD					

								Sample Name: AH-4	Date: 7/6/2023
								Site Name: Chiso 14 State Jet Pump	
								Incident Number: nAPP2205837214	
								Job Number: 03C2012059	
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR	Method: Hand Auger
Coordinates: 32.385064, -103.435746								Hole Diameter: 4"	Total Depth: 2.5'
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included in all chloride screenings.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions	
						0	CCHE	0-1' CALICHE, red/ brown, poorly sorted, sub-rounded grains, medium grained, no stain/odor, moist.	
M	5,964	1.3	N	AH-4	1	1	SP	1-2' SAND with trace silt, dark brown, poorly sorted, medium to fine grained, no stain/odor, moist.	
M	1,036	0.3	N			2			
M	1,215.2	0.9	N	AH-4A	2.5			2.5' SAA, medium brown	
						TD		Total Depth @ 2.5' bgs; auger refusal	

								Sample Name: AH-5		Date: 7/6/2023	
								Site Name: Chiso 14 State Jet Pump			
								Incident Number: nAPP2205837214			
								Job Number: 03C2012059			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR		Method: Hand Auger	
Coordinates: 32.385034, -103.435808								Hole Diameter: 4"		Total Depth: 3.5'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included in all chloride screenings.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0		0-1.5' bgs PREVIOUSLY EXCAVATED			
						1					
M	11,110.4	2.3	N			2	SP-SM	1.5-2.5' SAND with silt, dark brown, medium to fine grained, poorly sorted, no stain/ odor, moist.			
							SP-SC	2.5-3.5' SAND with clay, medium brown/red, fine grained, poorly sorted, no stain/odor, moist.			
M	12,986.4	0.6	N	AH-5	3	3					
M	2,329.60	1.5	N	AH-5A	3.5						
						TD		Total Depth @ 3.5' bgs; auger refusal			

								Sample Name: AH-6	Date: 7/6/2023
								Site Name: Chiso 14 State Jet Pump	
								Incident Number: nAPP2205837214	
								Job Number: 03C2012059	
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR	Method: Hand Auger
Coordinates: 32.384983, -103.435842								Hole Diameter: 4"	Total Depth: 2'
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included in all chloride screenings.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions	
						0		0-1.5' bgs PREVIOUSLY EXCAVATED	
						1			
M	280	26.7	N	AH-6	2	2	SP-SC	1.5-2' SAND with clay, dark brown, fine grained, poorly sorted, odorous, no stain, moist.	
						TD		Total Depth @ 2' bgs; auger refusal	



APPENDIX E

NMOCD Correspondance

Dan Moir

From: Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>
Sent: Friday, June 2, 2023 11:55 PM
To: Hadlie Green; Enviro, OCD, EMNRD
Cc: Tacoma Morrissey; Peter Van Patten; Kelton Beaird; Nathan Sirgo
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 06/05/2023

[**EXTERNAL EMAIL**]

Received.

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.

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



From: Hadlie Green <hgreen@ensolum.com>
Sent: Friday, June 2, 2023 9:25 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Peter Van Patten <pvanpatten@ensolum.com>; Kelton Beaird <KBeaird@btaoil.com>; Nathan Sirgo <nsirgo@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 06/05/2023

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 June 5, 2023.

- Harroun East Tank Battery / nAPP2202845563
 - Sampling Date: 6/5/2023 @ 9:00 AM MST
- Vaca Draw 9418 JV-P 001 / nCH1835540209
 - Sampling Date: 6/6/2023 @ 9:00 AM MST
- Carrasco 14-1H / nAPP2313656375
 - Sampling Date: 6/6/2023 @ 9:00 AM MST
- Chiso 14 State Jet Pump Excavation / nAPP2205837214

- Sampling Date: 6/5/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC

in f 

Dan Moir

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Friday, June 9, 2023 4:22 PM
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 06/12/2023

[**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 ensure 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](http://www.emnrd.nm.gov)



From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, June 8, 2023 9:14 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Kelton Beaird <KBeaird@btaoil.com>; Nathan Sirgo <nsirgo@btaoil.com>; Peter Van Patten <pvanpatten@ensolum.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 06/12/2023

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 June 12, 2023.

- Chiso 14 State Jet Pump Excavation / nAPP2205837214
 - Sampling Date: 6/12-13/2023 @ 9:00 AM MST
- Chiso 14 State 8711 #003H Wellhead / nAB1917652490
 - Sampling Date: 6/14-15/2023 @ 9:00 AM MST
- Chiso 14 State 8711 Flowline / nRM2034960665

- Sampling Date: 6/14-15/2023 @ 9:00 AM MST
- Mesa 30 31 Tank Battery / nAPP2106930621
 - Sampling Date: 6/14/2023 @ 9:00 AM MST
- Rojo 10-13/34-37 / nAPP2313055442
 - Sampling Date: 6/15-16/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC

in f 

Dan Moir

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Thursday, June 29, 2023 10:48 PM
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 07/3/2023

[**EXTERNAL EMAIL**]

Hadlie,

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

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](http://www.emnrd.nm.gov)



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

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

All,

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

- Vacuum SWD H 35 Pipeline / nAPP2313058428
 - Sampling Date: 7/5/2023 @ 9:00 AM MST
- Chiso 14 State Jet Pump Excavation / nAPP2205837214
 - Sampling Date: 7/6/2023 @ 9:00 AM MST
- Mesa B #25 / nAPP2112744758
 - Sampling Date: 7/6-7/2023 @ 9:00 AM MST

- Mesa #16H Flowline / nAPP2123156473
 - Sampling Date: 7/7/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC

in f



Dan Moir

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Wednesday, July 19, 2023 10:52 PM
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 07/24/2023

[**EXTERNAL EMAIL**]

Good afternoon Hadlie,

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

Thank you,

Shelly

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, July 19, 2023 1:36 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Kelton Beaird <KBeaird@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 07/24/2023

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 locations the week of July 24, 2023.

- Chiso 14 State Jet Pump and Excavation / nAPP2205837214
 - Sampling Date: 7/25-26/2023 @ 9:00 AM MST
- Mesa #2H Tank Battery / NRM2026945362
 - Sampling Date: 7/27/2023 @ 9:00 AM MST
- Mesa B #2 Tank Battery / nAPP2113973789
 - Sampling Date: 7/28/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC

in f 



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	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
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) nAPP2205837214
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

Location of Release Source

Latitude: 32.38511 Longitude: -103.43594

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Chiso 14 State Jet Pump and Excavation	Site Type: Tank Battery
Date Release Discovered: 2/26/2022	API# (if applicable) Nearest well:

Unit Letter	Section	Township	Range	County
P	14	22S	34E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name:)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 165 BBL	Volume Recovered (bbls) 70 BBL
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Jet Pump Failure.

A plug on the manifold of a Jet Pump failed and allowed water from the supply tank to drain from the pump and proceed westward directly into an active excavation being conducted to remove previously contaminated soil. The volume of recovered water was taken from the excavation. The estimate of the volume of water released was calculated from tank gauge data (attached).

Form C-141

Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?

☒ Yes ☐ No

If YES, for what reason(s) does the responsible party consider this a major release?

The volume of the release exceeds 25 BBL.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Yes, by filing a Notice of Release (NOR) on the NMOCD Permitting website on 2/27/2022. The Incident ID listed above was assigned after the NOR was acknowledged by the NMOCD.

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 release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Bob Hall Title: Environmental Manager

Signature: _____



Date: 3/8/2022

email: bhall@btaoil.com

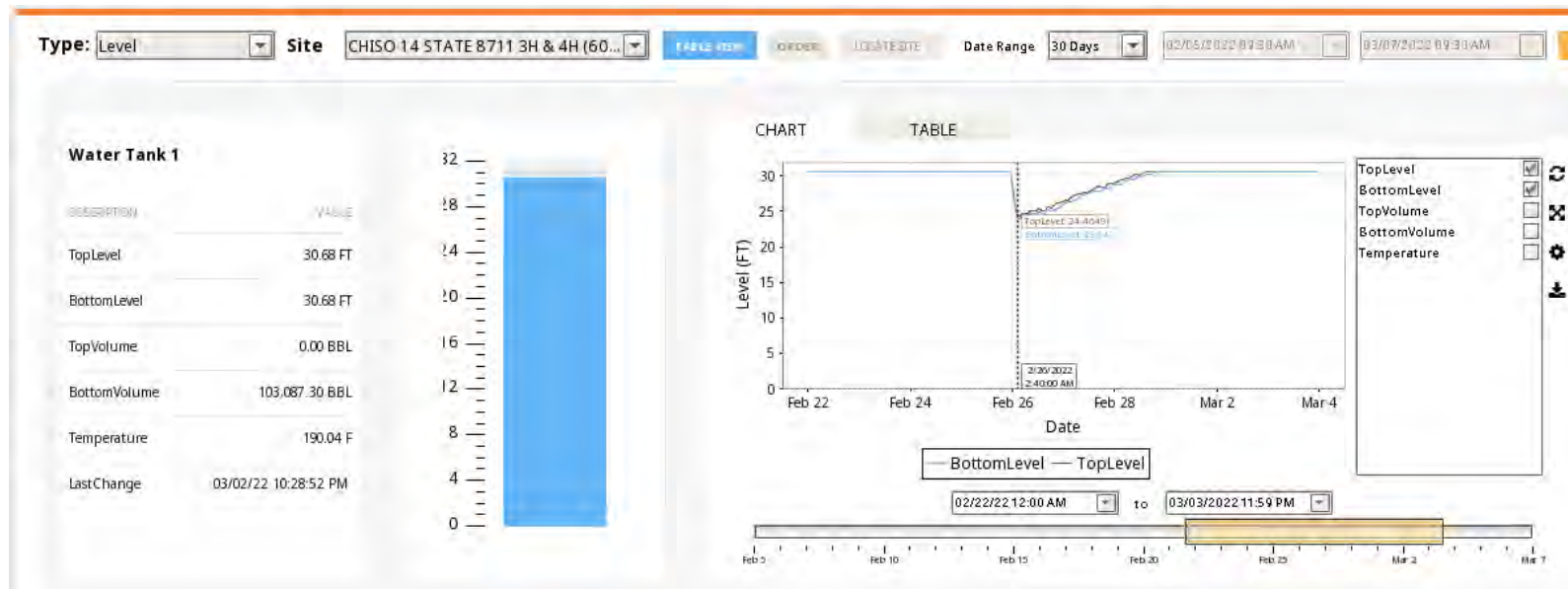
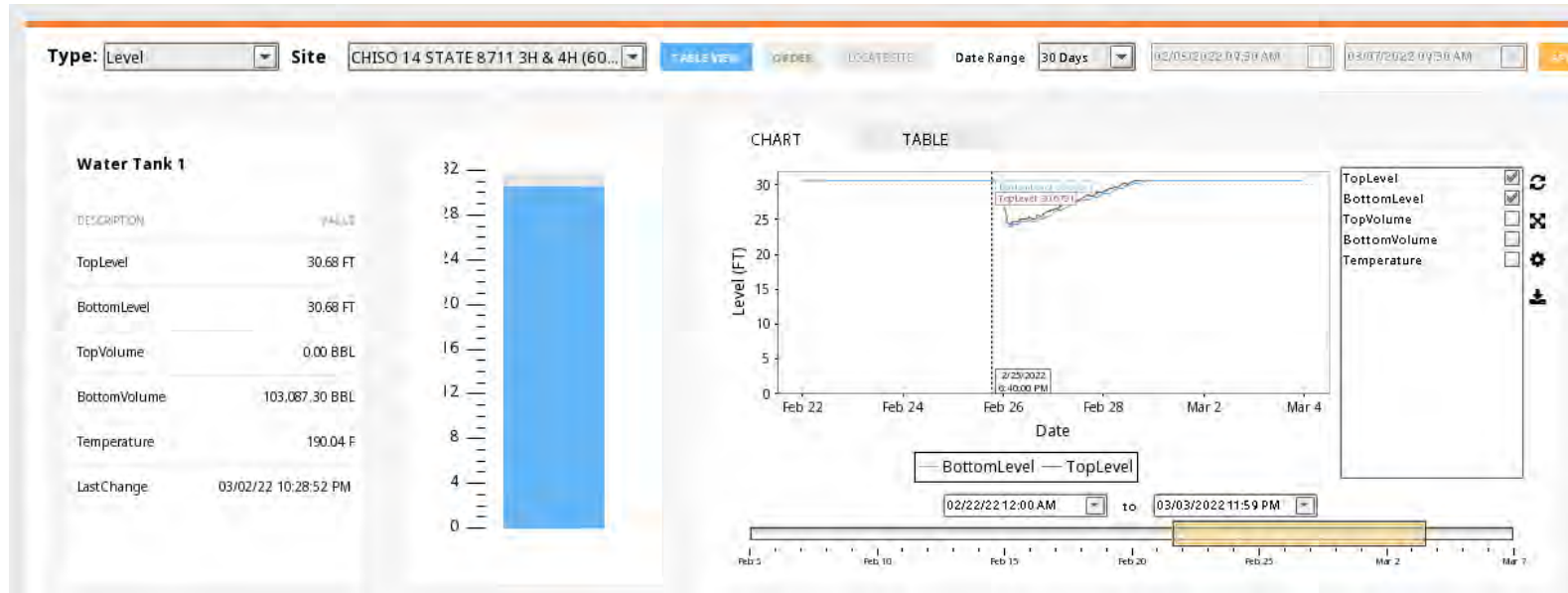
Telephone: 432-682-3753

OCD Only

Received by: _____

Date: _____

Chiso 14 State Water Tank Gauge – 2/26/2022



Incident ID	nAPP2205837214
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	42 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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


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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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

Incident ID	nAPP2205837214
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: 9/6/2023
email: KBeaird@btaoil.com Telephone: 432-312-2203

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2205837214
District RP	
Facility ID	
Application ID	

Remediation Plan

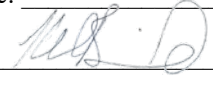
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kelton Beaird Title: Environmental Manager
Signature:  Date: 9/6/2023
email: KBeaird@btaoil.com Telephone: 432-312-2203

OCD Only

Received by: Shelly Wells Date: 9/11/2023

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

Signature:  Date: 11/17/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 263757

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 263757
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation plan approved as written. Remediation Due date updated to February 15, 2024 to submits its appropriate or final closure report.	11/17/2023



APPENDIX C

Photographic Log

**Photographic Log**

BTA Oil Producers, LLC

Chiso 14 State Jet Pump Excavation

nAPP2205837214



Photograph: 1 Date: 5/24/2023
Description: Existing excavation prior to sloping
View: North



Photograph: 2 Date: 6/12/2023
Description: Soil sampling of sidewalls
View: Southwest



Photograph: 3 Date: 9/1/2023
Description: Existing excavation on pad
View: Southwest



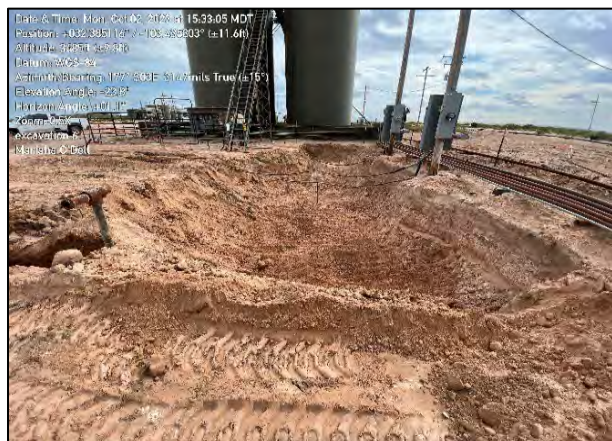
Photograph: 4 Date: 9/14/2023
Description: Delineation activities
View: East

**Photographic Log**

BTA Oil Producers, LLC

Chiso 14 State Jet Pump Excavation

nAPP2205837214



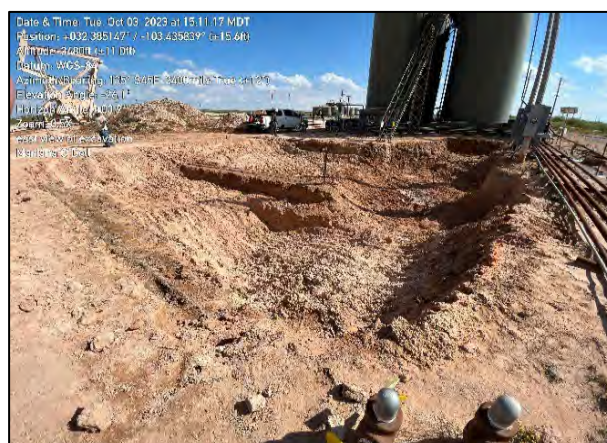
Photograph: 5 Date: 10/2/2023
 Description: Excavation activities
 View: South



Photograph: 6 Date: 10/3/2023
 Description: Excavation activities
 View: North



Photograph: 7 Date: 10/3/2023
 Description: Final excavation
 View: West


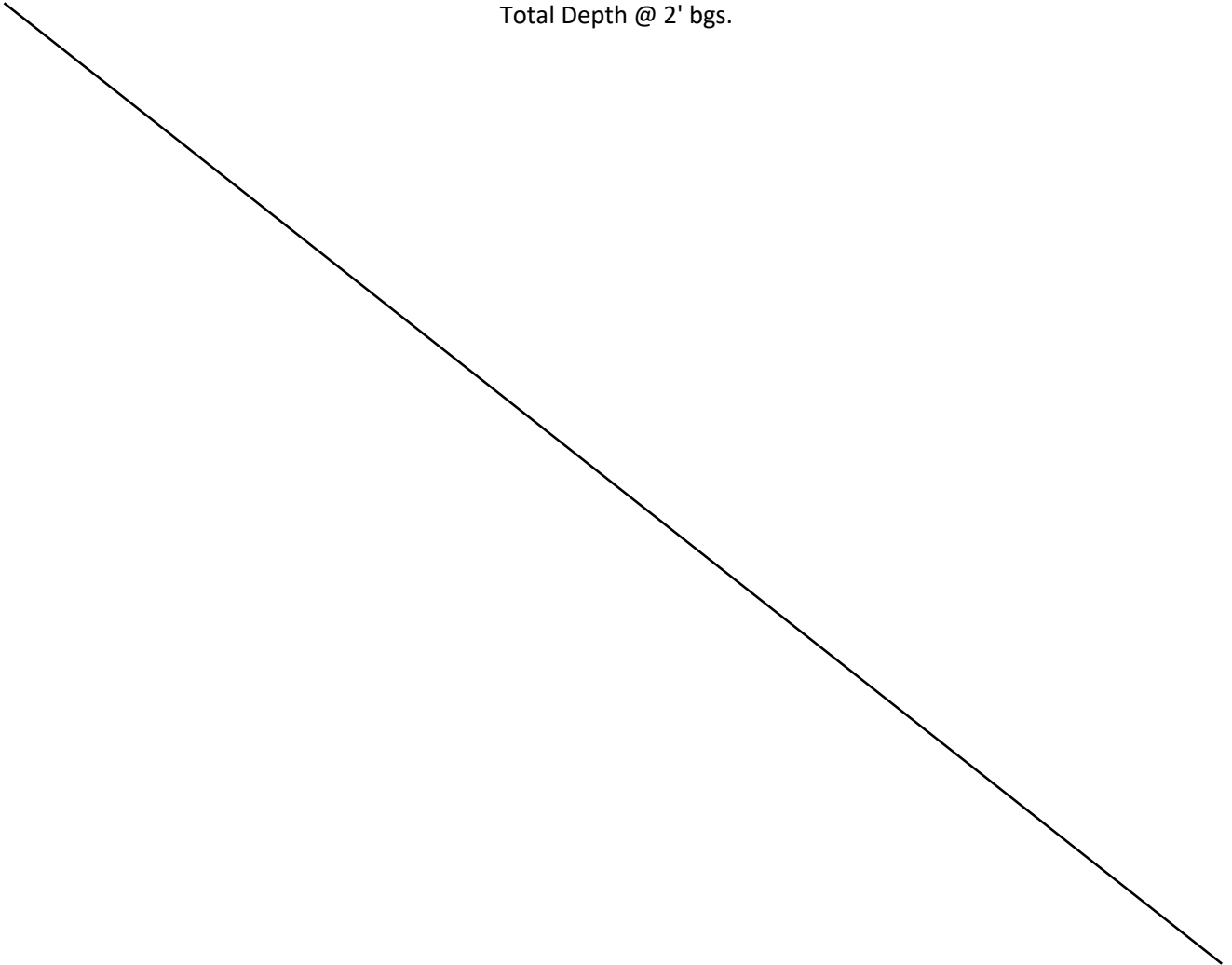



Photograph: 8 Date: 10/3/2023
 Description: Final excavation
 View: South





APPENDIX D


Lithologic / Soil Sampling Logs


								Sample Name: AH-1		Date: 7/6/2023 & 9/14/2023	
								Site Name: Chiso 14 State Jet Pump			
								Incident Number: nAPP2205837214			
								Job Number: 03C2012059			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR/MO		Method: Hand Auger/Backhoe	
Coordinates: 32.385084, -103.435850								Hole Diameter: 3.5"		Total Depth: 2'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride calculations completed with a +40% correction factor.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0		0-1.5' bgs PREVIOUSLY EXCAVATED			
						1					
						2	SP	1.5-2' SAND with trace silt, Medium to dark brown, medium grained, poorly sorted, no stain/odor, moist.			
M	280	0.7	N	AH-1	2	2					
Total Depth @ 2' bgs.											
											

					Sample Name: AH-2		Date: 7/6/2023 & 9/14/2023	
LITHOLOGIC / SOIL SAMPLING LOG					Site Name: Chiso 14 State Jet Pump			
					Incident Number: nAPP2205837214			
					Job Number: 03C2012059			
Coordinates: 32.385116, -103.435813					Logged By: MR/MO		Method: Hand Auger/Bakhoe	
					Hole Diameter: 3.5"		Total Depth: 6'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride calculations completed with a +40% correction factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0-1' CALICHE, red/ brown, poorly sorted, sub-rounded grains, medium grained, no stain/odor, moist.
M	14,476	3.2	N	AH-2	1	1	SP	1-2' SAND with trace silt, dark brown, poorly sorted, medium to fine grained, no stain/odor, moist.
M	3,589.6	1.3	N	AH-2A	2	2	SW	Sand. Brown, very fine to fine grained, well graded, no stain/odor, moist.
M	7,392	0	N	AH-2B	3	3	CCHE	Caliche, trace sand.
M	6,300	0	N		4	4		
M	5,365	0	N		5	5		
M	<174	0	N	AH-2C	6	6		
Total Depth @ 6' bgs.								
<div></div>								

						Sample Name: AH-3		Date: 7/6/2023 & 9/14/2023	
						Site Name: Chiso 14 State Jet Pump			
						Incident Number: nAPP2205837214			
						Job Number: 03C2012059			
LITHOLOGIC / SOIL SAMPLING LOG						Logged By: MR/MO		Method: Hand Auger/Backhoe	
Coordinates: 32.385110, -103.435728						Hole Diameter: 3.5"		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride calculations completed with a +40% correction factor.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions	
M	2,872.8	2.6	N	AH-3	1	0	CCHE	0-1' CALICHE, red/ brown, poorly sorted, sub-rounded grains, medium grained, no stain/odor, moist.	
M	2,178.4	1.1	N	AH-3A	2	1	SP	1-2' SAND with trace silt, dark to medium brown, poorly sorted, medium grained, no stain/odor, moist.	
M	1,176	0	N	AH-3B	3	2			
M	<174	0	M	AH-3C	4	3	CCHE	Caliche, trace sand. Sand, brown, very fine to fine grained, no stain/no odor, moist.	
					4	4			
Total Depth @ 4' bgs.									

								Sample Name: AH-4		Date: 7/6/2023 & 9/14/2023	
								Site Name: Chiso 14 State Jet Pump			
								Incident Number: nAPP2205837214			
								Job Number: 03C2012059			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR/MO		Method: Hand Auger/Backhoe	
Coordinates: 32.385064, -103.435746								Hole Diameter: 3.5"		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. A 40% error factor is included in all chloride screenings.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
M	5,964	1.3	N	AH-4	1	0	CCHE	0-1' CALICHE, red/ brown, poorly sorted, sub-rounded grains, medium grained, no stain/odor, moist.			
M	1,036	0.3	N	AH-4A	2	2	SP	1-2' SAND with trace silt, dark brown, poorly sorted, medium to fine grained, no stain/odor, moist.			
M	1,215.2	0.9	N		2.5			2.5' SAA, medium brown			
M	510	0	N		3						
M	<174	0	N	AH-4B	4	4	CCHE	Caliche, trace sand.			
Total Depth @ 4' bgs.											

								Sample Name: AH-5		Date: 7/6/2023 & 9/14/2023	
								Site Name: Chiso 14 State Jet Pump			
								Incident Number: nAPP2205837214			
								Job Number: 03C2012059			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR/MO		Method: Hand Auger/Backhoe	
Coordinates: 32.385034, -103.435808								Hole Diameter: 3.5"		Total Depth: 3.5'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride calculations completed with a +40% correction factor.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0		0-1.5' bgs PREVIOUSLY EXCAVATED			
						1					
M	11,110.4	2.3	N			2	SP-SM	1.5-2.5' SAND with silt, dark brown, medium to fine grained, poorly sorted, no stain/ odor, moist.			
							SP-SC	2.5-3.5' SAND with clay, medium brown/red, fine grained, poorly sorted, no stain/odor, moist.			
M	12,986.4	0.6	N	AH-5	3	3					
M	2,329.60	1.5	N	AH-5A	3.5						
M	1,579	0	N	AH-5B	4	4					
M	700	0	N		5	5					
M	302	0	N	AH-5C	6	6	CCHE	Caliche/Sand mixture.			
Total Depth @ 6' bgs.											

								Sample Name: AH-6		Date: 7/6/2023 & 9/14/2023	
								Site Name: Chiso 14 State Jet Pump			
								Incident Number: nAPP2205837214			
								Job Number: 03C2012059			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: MR/MO		Method: Hand Auger & Backhoe	
Coordinates: 32.384983, -103.435842								Hole Diameter: 3.5"		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. All chloride calculations completed with a +40% correction factor.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0		0-1.5' bgs PREVIOUSLY EXCAVATED			
						1					
M	280	26.7	N	AH-6	2	2	SP-SC	1.5-2' SAND with clay, dark brown, fine grained, poorly sorted, odorous, no stain, moist.			
M	258	0	N	AH-6A	3	3					
Total Depth @ 3' bgs.											



APPENDIX E

Laboratory Analytical Reports & Chain-of-Custody Documentation



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

July 17, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: CHISO 14 STATE JET PUMP EXCAVATION

Enclosed are the results of analyses for samples received by the laboratory on 07/12/23 12:30.

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/12/2023	Sampling Date:	07/12/2023
Reported:	07/17/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.38511-103.43594		

Sample ID: AH - 3B 3' (H233555-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/13/2023	ND	1.99	99.5	2.00	1.53	
Toluene*	<0.050	0.050	07/13/2023	ND	1.99	99.3	2.00	1.32	
Ethylbenzene*	<0.050	0.050	07/13/2023	ND	1.99	99.4	2.00	1.23	
Total Xylenes*	<0.150	0.150	07/13/2023	ND	5.87	97.8	6.00	1.40	
Total BTX	<0.300	0.300	07/13/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	07/13/2023	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2023	ND	213	106	200	0.650	
DRO >C10-C28*	<10.0	10.0	07/14/2023	ND	206	103	200	2.60	
EXT DRO >C28-C36	<10.0	10.0	07/14/2023	ND					

Surrogate: 1-Chlorooctane 99.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/12/2023	Sampling Date:	07/12/2023
Reported:	07/17/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.38511-103.43594		

Sample ID: AH - 4B 3.5' (H233555-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/13/2023	ND	1.99	99.5	2.00	1.53		
Toluene*	<0.050	0.050	07/13/2023	ND	1.99	99.3	2.00	1.32		
Ethylbenzene*	<0.050	0.050	07/13/2023	ND	1.99	99.4	2.00	1.23		
Total Xylenes*	<0.150	0.150	07/13/2023	ND	5.87	97.8	6.00	1.40		
Total BTEx	<0.300	0.300	07/13/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	07/13/2023	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2023	ND	213	106	200	0.650	
DRO >C10-C28*	<10.0	10.0	07/14/2023	ND	206	103	200	2.60	
EXT DRO >C28-C36	<10.0	10.0	07/14/2023	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.9 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/12/2023	Sampling Date:	07/12/2023
Reported:	07/17/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.38511-103.43594		

Sample ID: AH - 5B 4.5' (H233555-03)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/13/2023	ND	1.99	99.5	2.00	1.53		
Toluene*	<0.050	0.050	07/13/2023	ND	1.99	99.3	2.00	1.32		
Ethylbenzene*	<0.050	0.050	07/13/2023	ND	1.99	99.4	2.00	1.23		
Total Xylenes*	<0.150	0.150	07/13/2023	ND	5.87	97.8	6.00	1.40		
Total BTEx	<0.300	0.300	07/13/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

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	07/13/2023	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2023	ND	213	106	200	0.650	
DRO >C10-C28*	<10.0	10.0	07/14/2023	ND	206	103	200	2.60	
EXT DRO >C28-C36	<10.0	10.0	07/14/2023	ND					

Surrogate: 1-Chlorooctane 91.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.2 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

BILL TO

ANALYSIS REQUEST

Project Manager: Heddie Green

P.O. #:

Address: 3122 Nat'l Parks Hwy

Company: BTA Oil

City: Carlsbad

State: NM Zip: 88220

Attn: Keten Beaird

Phone #: 432-557-8895 Fax #:

Address: 104 S. Peers St

Project #: 0302012-059 Project Owner:

City: Midland

Project Name: Criso 14 State & Pump

State: TX Zip: 79701

Project Location: 32.38511, -103.43594

Phone #:

Sampler Name: Meredith Robert

Fax #:

FOR LAB USE ONLY

MATRIX

PRESERV

SAMPLING

Lab I.D.

Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

BTEX

Chlorides

TPH

1 AH-3B
2 AH-4B
3 AH-5B

3'

3.5'

4.5'

G ↓ ↓

X ↓

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Relinquished By:

Date: 2-12-23

Received By:

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

Relinquished By:

Date: 2-12-23

Received By:

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

Delivered By: (Circle One)

Observed Temp. °C 28

Sample Condition Cool Intact ☒ Yes ☒ Yes ☐ No ☐ No

CHECKED BY: (Initials)

Turnaround Time: Standard Rush ☒ ☐

Thermometer ID #1175 #1140

Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No

Observed Temp. °C

Corrected Temp. °C

Sampler - UPS - Bus - Other:

Corrected Temp. °C

Sample Condition Cool Intact ☒ Yes ☒ Yes ☐ No ☐ No

CHECKED BY: (Initials)

Turnaround Time: Standard Rush ☒ ☐

Thermometer ID #1175 #1140

Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No

Observed Temp. °C

Corrected Temp. °C

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



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

June 20, 2023

TACOMA MORRISSEY

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: CHISO 14 STATE JET PUMP EXCAVATION

Enclosed are the results of analyses for samples received by the laboratory on 06/14/23 13:45.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 01 7' (H233049-01)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8	
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54	
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48	
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26	
Total BTEX	<0.300	0.300	06/16/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 02 7' (H233049-02)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 03 7' (H233049-03)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 04 7' (H233049-04)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 05 7' (H233049-05)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 06 7' (H233049-06)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	ND	416	104	400	3.77		

TPH 8015M	mg/kg		Analyzed 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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	860	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	204	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 152 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 07 7' (H233049-07)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEx	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/19/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/19/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/19/2023	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 08 7' (H233049-08)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/16/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/16/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/16/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/16/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/16/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134

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	06/15/2023	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	06/15/2023	ND	197	98.4	200	0.977	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	178	89.0	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 09 7' (H233049-09)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/17/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 91.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 10 7' (H233049-10)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	1.55	77.7	2.00	23.8		
Toluene*	<0.050	0.050	06/17/2023	ND	1.83	91.6	2.00	5.54		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	1.95	97.4	2.00	1.48		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	5.87	97.8	6.00	3.26		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 89.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 11 7' (H233049-11)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEx	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 12 4' (H233049-12)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/16/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/16/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/16/2023	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 137 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 13 4' (H233049-13)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

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	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 94.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 14 19' (H233049-14)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 83.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 15 19' (H233049-15)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 129 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 16 19' (H233049-16)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859	
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30	
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29	
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30	
Total BTX	<0.300	0.300	06/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 128 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 17 19' (H233049-17)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 71.5-134

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	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 18 1.5' (H233049-18)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10400	16.0	06/15/2023	ND	416	104	400	0.00	QM-07, QR-03	

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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 19 1.5' (H233049-19)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 20 1.5' (H233049-20)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEx	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	359	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	97.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 143 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 21 1.5' (H233049-21)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEx	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	736	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	25.6	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 99.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 01 0-4' (H233049-22)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 99.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 02 0-4' (H233049-23)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859	
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30	
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29	
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30	
Total BTX	<0.300	0.300	06/17/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 85.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 03 0-4' (H233049-24)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 97.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 04 0-4' (H233049-25)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 88.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 05 0-4' (H233049-26)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 82.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 06 0-4' (H233049-27)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

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	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 96.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 07 0-4' (H233049-28)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1340	16.0	06/15/2023	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	06/15/2023	ND	188	93.8	200	0.865	
DRO >C10-C28*	176	10.0	06/15/2023	ND	210	105	200	2.74	
EXT DRO >C28-C36	38.6	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 78.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 08 4-7' (H233049-29)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTEX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.1 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 09 4-7' (H233049-30)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/17/2023	ND	2.09	105	2.00	0.859		
Toluene*	<0.050	0.050	06/17/2023	ND	2.36	118	2.00	2.30		
Ethylbenzene*	<0.050	0.050	06/17/2023	ND	2.28	114	2.00	3.29		
Total Xylenes*	<0.150	0.150	06/17/2023	ND	6.93	116	6.00	3.30		
Total BTX	<0.300	0.300	06/17/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 87.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.5 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 10 4-7' (H233049-31)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7	
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79	
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19	
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82	
Total BTEX	<0.300	0.300	06/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 71.5-134

Chloride, SM4500Cl-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	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 83.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/13/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 11 4-7' (H233049-32)

BTX 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 71.5-134

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26		
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54		
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND						

Surrogate: 1-Chlorooctane 89.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 12 4-7' (H233049-33)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 74.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.3 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 13 0-4' (H233049-34)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7	
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79	
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19	
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82	
Total BTEX	<0.300	0.300	06/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 75.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.7 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 14 0-4' (H233049-35)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1920	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 15 4-9' (H233049-36)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 78.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.1 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 16 14-19' (H233049-37)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7	
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79	
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19	
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82	
Total BTEX	<0.300	0.300	06/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 79.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.8 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 17 9-14' (H233049-38)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	06/15/2023	ND	432	108	400	0.00	QR-03	

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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 18 4-9' (H233049-39)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7	
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79	
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19	
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82	
Total BTEX	<0.300	0.300	06/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 98.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 19 14-19' (H233049-40)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 78.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.8 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	06/14/2023	Sampling Date:	06/12/2023
Reported:	06/20/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Shalyn Rodriguez
Project Location:	BTA 32.38511-103.43594		

Sample ID: SW 20 9-14' (H233049-41)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/15/2023	ND	1.89	94.4	2.00	23.7		
Toluene*	<0.050	0.050	06/15/2023	ND	1.99	99.4	2.00	8.79		
Ethylbenzene*	<0.050	0.050	06/15/2023	ND	2.09	104	2.00	3.19		
Total Xylenes*	<0.150	0.150	06/15/2023	ND	6.23	104	6.00	2.82		
Total BTEX	<0.300	0.300	06/15/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	06/15/2023	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	06/15/2023	ND	228	114	200	7.26	
DRO >C10-C28*	<10.0	10.0	06/15/2023	ND	233	116	200	5.54	
EXT DRO >C28-C36	<10.0	10.0	06/15/2023	ND					

Surrogate: 1-Chlorooctane 81.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

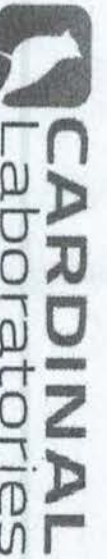
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-04	The RPD for the BS/BSD was outside of historical limits.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC 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.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

 Cardinal Laboratories

*=Accredited Analyte

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 Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Ensolum, LLC

Project Manager: See Pg 1

Address:

City:

Phone #:

Project #:

Project Name:

Project Location:

Sampler Name:

P.O. #:

Company: BTA Oil

Attn: See Pg 1

Address:

City:

State:

Phone #:

PAGE 2 of 5
ANALYSIS REQUEST

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	BTEX	Chlorides	TPH							
H233049	FS11	7'	C	1	GROUNDWATER			4/13/23	1325	X	X	X							
	FS12	4'			WASTEWATER				1330										
	FS13	19'			SOIL				1335										
	FS14				OIL				1340										
	FS15				SLUDGE				1345										
	FS16				OTHER:				1350										
	FS17	1.5'			ACID/BASE:				1355										
	FS18				ICE / COOL				1215										
	FS19				OTHER:				1220										
	FS20								1230										

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Relinquished By:

Date: 4/13/23

Received By:

Verbal Result: ☐ Yes ☒ No Add'l Phone #:

All Results are emailed. Please provide Email address:

Relinquished By:

Date: 4/13/23

Received By:

REMARKS: See Pg 1

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp.: -1.4
Corrected Temp.: -2.0

Sample Condition
Cool Intact ☒
Yes ☐ No ☐

CHECKED BY: (initials)

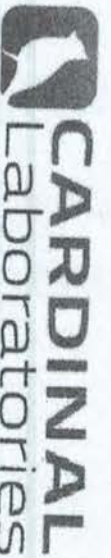
Turnaround Time:

Standard Rush ☒

Bacteria (only) Sample Condition
Cool Intact ☒
Yes ☐ No ☐

Observed Temp.:
Corrected Temp.: °C

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



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Ensolum, LLC

BILL TO

ANALYSIS REQUEST

PAGE 3 of 5

Project Manager: See Pg 1		P.O. #:	
Address:		Company: BTA Oil	
City:	State:	Attn: See Pg 1	
Phone #:	Fax #:	Address:	
Project #: 03C2012059		City:	
Project Name: Chise 14 State Jet Pump Excavation		State:	
Project Location: 32.38511, -103.43594		Zip:	
Sampler Name: Meredith Roberts		Phone #:	
FOR LAB USE ONLY		Fax #:	

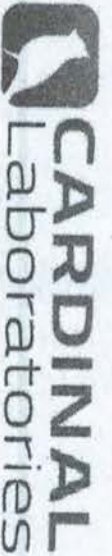
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	BTEX	Chlorides	TPH
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:					
4233349	ES21	1.5'	C	1												
23	SW01	0-4'			X											
23	SW02															
24	SW03															
25	SW04															
26	SW05															
27	SW06															
28	SW07															
29	SW08	4-7'														
30	SW09															

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Relinquished By: <i>Meredith</i>	Date: 6/14/23	Received By: <i>Speckle</i>	Date: 6/14/23
Time: 1345		Time: 1345	
Relinquished By: <i>Meredith</i>	Date: 6/14/23	Received By: <i>Speckle</i>	Date: 6/14/23
Time: 1345		Time: 1345	

Delivered By: (Circle One)	Observed Temp. °C	Sample Condition	CHECKED BY: <i>(initials)</i>	Turnaround Time:	Standard	Bacteria (only)	Sample Condition
Sampler - UPS - Bus - Other:	Corrected Temp. °C	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Thermometer ID #113	Rush <input type="checkbox"/>	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	Observed Temp. °C
	-1.4						
	-2.0						

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



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Ensolum, LLC

PAGE 4 of 5

Project Manager: See Pg 1

Address:

City:

Phone #:

Project #:

Project Name:

Project Location:

Sampler Name:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

BILL TO

P.O. #:

Company: BTA O.I.

Attn: See Pg 1

Address:

City:

State:

Phone #:

Fax #:

PRESERV.

SAMPLING

DATE

TIME

BTEX

Chlorides

TPH

1345

1340

1335

1330

1325

1320

ANALYSIS REQUEST

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Relinquished By:

Date: 6/14/23

Received By:

Verbal Result: ☐ Yes ☒ No

Add'l Phone #:

All Results are emailed. Please provide Email address:

Relinquished By:

Date: 6/14/23

Received By:

REMARKS:

See Pg 1

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C

Corrected Temp. °C

Sample Condition

Cool Intact

CHECKED BY:

Thermometer ID #113

Standard

Rush

Bacteria (only)

Cool Intact

Sample Condition

Observed Temp. °C

Corrected Temp. °C

Corrected Temp. °C

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



PAGE 5 OF 5

Page 48 of 48



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

July 13, 2023

HADLIE GREEN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: CHISO 14 STATE JET PUMP EXCAVATION

Enclosed are the results of analyses for samples received by the laboratory on 07/12/23 12:30.

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	07/12/2023	Sampling Date:	07/12/2023
Reported:	07/13/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP EXCAVATION	Sampling Condition:	Cool & Intact
Project Number:	03C2012059	Sample Received By:	Tamara Oldaker
Project Location:	BTA 32.38511-103.43594		

Sample ID: FS 06 A 8' (H233554-01)

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/12/2023	ND	1.82	91.0	2.00	0.314	
Toluene*	<0.050	0.050	07/12/2023	ND	1.81	90.4	2.00	1.01	
Ethylbenzene*	<0.050	0.050	07/12/2023	ND	1.79	89.4	2.00	0.0992	
Total Xylenes*	<0.150	0.150	07/12/2023	ND	5.44	90.6	6.00	0.976	
Total BTX	<0.300	0.300	07/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/13/2023	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/13/2023	ND	205	103	200	5.13	
DRO >C10-C28*	<10.0	10.0	07/13/2023	ND	222	111	200	6.09	
EXT DRO >C28-C36	<10.0	10.0	07/13/2023	ND					

Surrogate: 1-Chlorooctane 98.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

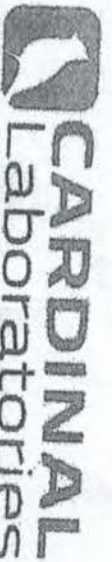
Cardinal Laboratories

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC		Project Manager: Hadlee Green		P.O. #:		BILL TO		ANALYSIS REQUEST												
Address: 3122 Nati Parks Hwy		City: Carlsbad		State: NM Zip: 88220		Company: BTA Oil														
Phone #: 432-557-8895		Fax #:		Attn: BMT Kelton Bealnd		Address: 104 S. Pecos St.														
Project #: 03C0012059		Project Owner:		City: Midland		State: TX Zip: 79701														
Project Location: 32.3851, -103.4394		Sampler Name: Meredith Roberts		Phone #:		Fax #:														
FOR LAB USE ONLY																				
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX			PRESERV.	SAMPLING											
					GROUNDWATER	WASTEWATER	SOIL													
H033554	FS06A	8'	C-1	1	<input checked="" type="checkbox"/> SOIL	<input type="checkbox"/> OIL	<input type="checkbox"/> SLUDGE	<input type="checkbox"/> OTHER :	<input checked="" type="checkbox"/> ACID/BASE:	<input checked="" type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :	DATE	TIME	X	X	X	BTEX	Chlorides	TPH	ne
					<input type="checkbox"/> GROUNDWATER	<input type="checkbox"/> WASTEWATER	<input type="checkbox"/> OTHER :	<input type="checkbox"/> ACID/BASE:	<input type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :										
					<input type="checkbox"/> SOIL	<input type="checkbox"/> OIL	<input type="checkbox"/> SLUDGE	<input type="checkbox"/> OTHER :	<input type="checkbox"/> ACID/BASE:	<input type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :									
					<input type="checkbox"/> GROUNDWATER	<input type="checkbox"/> WASTEWATER	<input type="checkbox"/> OTHER :	<input type="checkbox"/> ACID/BASE:	<input type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :										
					<input type="checkbox"/> SOIL	<input type="checkbox"/> OIL	<input type="checkbox"/> SLUDGE	<input type="checkbox"/> OTHER :	<input type="checkbox"/> ACID/BASE:	<input type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :									
					<input type="checkbox"/> GROUNDWATER	<input type="checkbox"/> WASTEWATER	<input type="checkbox"/> OTHER :	<input type="checkbox"/> ACID/BASE:	<input type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :										
					<input type="checkbox"/> SOIL	<input type="checkbox"/> OIL	<input type="checkbox"/> SLUDGE	<input type="checkbox"/> OTHER :	<input type="checkbox"/> ACID/BASE:	<input type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :									
					<input type="checkbox"/> GROUNDWATER	<input type="checkbox"/> WASTEWATER	<input type="checkbox"/> OTHER :	<input type="checkbox"/> ACID/BASE:	<input type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :										
					<input type="checkbox"/> SOIL	<input type="checkbox"/> OIL	<input type="checkbox"/> SLUDGE	<input type="checkbox"/> OTHER :	<input type="checkbox"/> ACID/BASE:	<input type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :									
					<input type="checkbox"/> GROUNDWATER	<input type="checkbox"/> WASTEWATER	<input type="checkbox"/> OTHER :	<input type="checkbox"/> ACID/BASE:	<input type="checkbox"/> ICE / COOL	<input type="checkbox"/> OTHER :										
PLEASE NOTE: Liability and Damages. Cardinal's liability and damages are limited to the amount paid by the client for the analysis. All claims including those for negligence and any other claims whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analysis. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of data, or loss of profits, incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																				
Relinquished By: [Signature]		Date: 7-12-23		Received By: [Signature]		Date: 7/12/23		Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:												
Relinquished By: [Signature]		Date: 7-12-23		Received By: [Signature]		Date: 7/12/23		Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:												
Delivered By: (Circle One)		Observed Temp. °C 3.5		Sample Condition		CHECKED BY: [Signature]		Turnaround Time:												
Sampler - UPS - Bus - Other:		Corrected Temp. °C		Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Initials:		Standard <input type="checkbox"/> Rush <input type="checkbox"/> Bacteria (only) Sample Condition												
				Yes <input type="checkbox"/> No <input type="checkbox"/>				Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>												
				Yes <input type="checkbox"/> No <input type="checkbox"/>				Observed Temp. °C												
				Yes <input type="checkbox"/> No <input type="checkbox"/>				Corrected Temp. °C												
REMARKS: Incident #: nAPP22058 37214																				
Thermometer ID #44 Hydrometer Corrosion Factor 45°C to 47°C																				
Cardinal cannot accept verbal changes. Please email changes to caley.keene@cardinalabnm.com																				



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

July 31, 2023

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: CHISO 14 STATE JET PUMP

Enclosed are the results of analyses for samples received by the laboratory on 07/24/23 12:35.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/24/2023
 Reported: 07/31/2023
 Project Name: CHISO 14 STATE JET PUMP
 Project Number: 03C2012059
 Project Location: BTA (32.38511-103.43594)

Sampling Date: 07/24/2023
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: FS 22 4' (H233846-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2023	ND	1.96	98.2	2.00	6.04	
Toluene*	<0.050	0.050	07/28/2023	ND	2.07	103	2.00	2.52	
Ethylbenzene*	<0.050	0.050	07/28/2023	ND	2.05	102	2.00	6.01	
Total Xylenes*	<0.150	0.150	07/28/2023	ND	6.17	103	6.00	7.34	
Total BTX	<0.300	0.300	07/28/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7330	16.0	07/26/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2023	ND	195	97.6	200	11.6	
DRO >C10-C28*	<10.0	10.0	07/27/2023	ND	216	108	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/27/2023	ND					

Surrogate: 1-Chlorooctane 91.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/24/2023
 Reported: 07/31/2023
 Project Name: CHISO 14 STATE JET PUMP
 Project Number: 03C2012059
 Project Location: BTA (32.38511-103.43594)

Sampling Date: 07/24/2023
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: FS 23 4' (H233846-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/28/2023	ND	1.96	98.2	2.00	6.04		
Toluene*	<0.050	0.050	07/28/2023	ND	2.07	103	2.00	2.52		
Ethylbenzene*	<0.050	0.050	07/28/2023	ND	2.05	102	2.00	6.01		
Total Xylenes*	<0.150	0.150	07/28/2023	ND	6.17	103	6.00	7.34		
Total BTEx	<0.300	0.300	07/28/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1170	16.0	07/26/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2023	ND	195	97.6	200	11.6	
DRO >C10-C28*	<10.0	10.0	07/27/2023	ND	216	108	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/27/2023	ND					

Surrogate: 1-Chlorooctane 88.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.4 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/24/2023
 Reported: 07/31/2023
 Project Name: CHISO 14 STATE JET PUMP
 Project Number: 03C2012059
 Project Location: BTA (32.38511-103.43594)

Sampling Date: 07/24/2023
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SW 21 0-4' (H233846-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/28/2023	ND	1.96	98.2	2.00	6.04	
Toluene*	<0.050	0.050	07/28/2023	ND	2.07	103	2.00	2.52	
Ethylbenzene*	<0.050	0.050	07/28/2023	ND	2.05	102	2.00	6.01	
Total Xylenes*	<0.150	0.150	07/28/2023	ND	6.17	103	6.00	7.34	
Total BTEx	<0.300	0.300	07/28/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	18000	16.0	07/26/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2023	ND	195	97.6	200	11.6	
DRO >C10-C28*	<10.0	10.0	07/27/2023	ND	216	108	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/27/2023	ND					

Surrogate: 1-Chlorooctane 90.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 07/24/2023
 Reported: 07/31/2023
 Project Name: CHISO 14 STATE JET PUMP
 Project Number: 03C2012059
 Project Location: BTA (32.38511-103.43594)

Sampling Date: 07/24/2023
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: SW 22 0-4' (H233846-04)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/28/2023	ND	1.96	98.2	2.00	6.04		
Toluene*	<0.050	0.050	07/28/2023	ND	2.07	103	2.00	2.52		
Ethylbenzene*	<0.050	0.050	07/28/2023	ND	2.05	102	2.00	6.01		
Total Xylenes*	<0.150	0.150	07/28/2023	ND	6.17	103	6.00	7.34		
Total BTEX	<0.300	0.300	07/28/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	11600	16.0	07/26/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/27/2023	ND	195	97.6	200	11.6	
DRO >C10-C28*	<10.0	10.0	07/27/2023	ND	216	108	200	11.6	
EXT DRO >C28-C36	<10.0	10.0	07/27/2023	ND					

Surrogate: 1-Chlorooctane 90.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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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A handwritten signature in black ink, appearing to read "C. D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Ensdlum		P.O. #:		ANALYSIS REQUEST	
Project Manager: Hadlie Green		Company: BTA Oil			
Address: 601 W. Marlandfield St #40		Attn: Kelton Beard			
City: Midland		Address: 104 S. Pecos St			
Phone #: 432-557-8895		City: Midland			
Fax #: Project #:		State: TX Zip: 79701			
Project #:		State: TX Zip: 79701			
Project Name: Chiss 14 State Jet Pump		Phone #: 432-682-3753			
Project Location: 32,38511, -103,43594		Fax #:			
Sampler Name: Peter Van Patten					

FOR LAB USE ONLY		BILL TO			
Lab I.D.		Sample I.D.			
H233846		Depth			
1 FS21		(G)RAB OR (C)OMP.			
2 FS22		# CONTAINERS			
3 SW21		GROUNDWATER			
4 SW22		WASTEWATER			
		SOIL			
		OIL			
		SLUDGE			
		OTHER:			
		ACID/BASE:			
		ICE / COOL			
		OTHER:			
		DATE			
		TIME			
		TPH			
		BTEX			
		Chlorides			

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 consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder. By Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 7-24-23	Received By:	Date: 7-24-23
Time: 1235		Time: 1235	
Date: 7-24-23		Date: 7-24-23	
Time: 1235		Time: 1235	

Relinquished By: [Signature]

Received By: [Signature]

Delivered By: (Circle One) Observed Temp. °C 7.3 Sample Condition Cool Intact Yes No

Sampler - UPS - Bus - Other: Corrected Temp. °C 7.3

Turnaround Time: Standard Rush Bacteria (only) Sample Condition Cool Intact Yes No Observed Temp. °C Corrected Temp. °C

REMARKS: All Results are emailed. Please provide Email address: hysol@ensdlum.com, twonissy@ensdlum.com

Verbal Result: Yes No Add'l Phone #:

Thermometer ID #140 Correction Factor 0°C

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

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

November 07, 2023

HADLIE GREEN

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: CHISO 14 STATE JET PUMP

Enclosed are the results of analyses for samples received by the laboratory on 10/03/23 16:15.

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

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

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

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

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

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

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 24 3'	H235385-01	Soil	02-Oct-23 13:05	03-Oct-23 16:15
FS 25 6'	H235385-02	Soil	02-Oct-23 14:30	03-Oct-23 16:15
SW 23 0-6'	H235385-03	Soil	03-Oct-23 10:45	03-Oct-23 16:15
FS 26 6'	H235385-04	Soil	03-Oct-23 10:50	03-Oct-23 16:15
FS 27 3'	H235385-05	Soil	03-Oct-23 11:25	03-Oct-23 16:15
FS 28 6'	H235385-06	Soil	03-Oct-23 12:00	03-Oct-23 16:15
SW 24 0-6'	H235385-07	Soil	03-Oct-23 11:35	03-Oct-23 16:15
SW 25 0-6'	H235385-08	Soil	03-Oct-23 11:30	03-Oct-23 16:15
FS 29 6'	H235385-09	Soil	03-Oct-23 12:05	03-Oct-23 16:15
FS 30 4'	H235385-10	Soil	03-Oct-23 12:40	03-Oct-23 16:15
FS 31 4'	H235385-11	Soil	03-Oct-23 12:45	03-Oct-23 16:15
FS 32 4'	H235385-12	Soil	03-Oct-23 14:10	03-Oct-23 16:15
FS 33 4'	H235385-13	Soil	03-Oct-23 14:15	03-Oct-23 16:15
SW 26 0-4'	H235385-14	Soil	03-Oct-23 13:00	03-Oct-23 16:15
SW 27 0-6'	H235385-15	Soil	03-Oct-23 13:05	03-Oct-23 16:15
SW 28 0-6'	H235385-16	Soil	03-Oct-23 14:20	03-Oct-23 16:15
SW 29 0-6'	H235385-17	Soil	03-Oct-23 14:25	03-Oct-23 16:15

11/07/23 - Client changed the sample IDs (see COC). This is the revised report and will replace the one sent on 10/04/23.

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 24 3'
H235385-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	400		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100339	JH	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			97.9 %		71.5-134	3100339	JH	04-Oct-23	8021B	
---------------------------------------	--	--	--------	--	----------	---------	----	-----------	-------	--

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane			109 %		48.2-134	3100340	MS	04-Oct-23	8015B	
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Surrogate: 1-Chlorooctadecane			142 %		49.1-148	3100340	MS	04-Oct-23	8015B	
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 25 6'
H235385-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	32.0		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100339	JH	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			108 %	71.5-134		3100339	JH	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane			103 %	48.2-134		3100340	MS	04-Oct-23	8015B	
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Surrogate: 1-Chlorooctadecane			129 %	49.1-148		3100340	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

SW 23 0-6'
H235385-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	64.0		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100339	JH	04-Oct-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			106 %	71.5-134		3100339	JH	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			86.2 %	48.2-134		3100340	MS	04-Oct-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			94.2 %	49.1-148		3100340	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 26 6'
H235385-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	128		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Toluene*	<0.050	0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	3100339	JH	04-Oct-23	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	3100339	JH	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)	102 %	71.5-134	3100339	JH	04-Oct-23	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	3100340	MS	04-Oct-23	8015B

Surrogate: 1-Chlorooctane	114 %	48.2-134	3100340	MS	04-Oct-23	8015B
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Surrogate: 1-Chlorooctadecane	147 %	49.1-148	3100340	MS	04-Oct-23	8015B
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 27 3'
H235385-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	80.0		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			107 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane			111 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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Surrogate: 1-Chlorooctadecane			112 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 28 6'
H235385-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	272		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050	0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)	106 %	71.5-134	3100343	MS	04-Oct-23	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B

Surrogate: 1-Chlorooctane	110 %	48.2-134	3100344	MS	04-Oct-23	8015B
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Surrogate: 1-Chlorooctadecane	115 %	49.1-148	3100344	MS	04-Oct-23	8015B
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

SW 24 0-6'
H235385-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	224		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050	0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050	0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)	103 %	71.5-134	3100343	MS	04-Oct-23	8021B
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B
DRO >C10-C28*	<10.0	10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B

Surrogate: 1-Chlorooctane	108 %	48.2-134	3100344	MS	04-Oct-23	8015B
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Surrogate: 1-Chlorooctadecane	111 %	49.1-148	3100344	MS	04-Oct-23	8015B
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

SW 25 0-6'
H235385-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	224		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			103 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane			116 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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Surrogate: 1-Chlorooctadecane			120 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 29 6'
H235385-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	352		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			107 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane			102 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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Surrogate: 1-Chlorooctadecane			104 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 30 4'
H235385-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	288		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			105 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			107 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			111 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 31 4'
H235385-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	256		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			105 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			107 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			114 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 32 4'
H235385-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	32.0		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			105 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			107 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			110 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

FS 33 4'
H235385-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	128		16.0	mg/kg	4	3100419	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			104 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane			92.6 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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Surrogate: 1-Chlorooctadecane			95.5 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

SW 26 0-4'
H235385-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	80.0		16.0	mg/kg	4	3100421	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			105 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane			101 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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Surrogate: 1-Chlorooctadecane			105 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

SW 27 0-6'
H235385-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	80.0		16.0	mg/kg	4	3100421	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 105 % 71.5-134 3100343 MS 04-Oct-23 8021B

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane 108 % 48.2-134 3100344 MS 04-Oct-23 8015B

Surrogate: 1-Chlorooctadecane 109 % 49.1-148 3100344 MS 04-Oct-23 8015B

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

SW 28 0-6'
H235385-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	48.0		16.0	mg/kg	4	3100421	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			105 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane			105 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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Surrogate: 1-Chlorooctadecane			105 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

SW 29 0-6'
H235385-17 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories**Inorganic Compounds**

Chloride	96.0		16.0	mg/kg	4	3100421	AC	04-Oct-23	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3100343	MS	04-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3100343	MS	04-Oct-23	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			103 %	71.5-134		3100343	MS	04-Oct-23	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3100344	MS	04-Oct-23	8015B	

Surrogate: 1-Chlorooctane			103 %	48.2-134		3100344	MS	04-Oct-23	8015B	
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Surrogate: 1-Chlorooctadecane			102 %	49.1-148		3100344	MS	04-Oct-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 3100419 - 1:4 DI Water**Blank (3100419-BLK1)**

Prepared & Analyzed: 04-Oct-23

Chloride	ND	16.0	mg/kg						
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LCS (3100419-BS1)

Prepared & Analyzed: 04-Oct-23

Chloride	432	16.0	mg/kg	400	108	80-120			
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LCS Dup (3100419-BSD1)

Prepared & Analyzed: 04-Oct-23

Chloride	432	16.0	mg/kg	400	108	80-120	0.00	20	
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Batch 3100421 - 1:4 DI Water**Blank (3100421-BLK1)**

Prepared & Analyzed: 04-Oct-23

Chloride	ND	16.0	mg/kg						
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LCS (3100421-BS1)

Prepared & Analyzed: 04-Oct-23

Chloride	416	16.0	mg/kg	400	104	80-120			
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LCS Dup (3100421-BSD1)

Prepared & Analyzed: 04-Oct-23

Chloride	432	16.0	mg/kg	400	108	80-120	3.77	20	
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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3100339 - Volatiles**Blank (3100339-BLK1)**

Prepared & Analyzed: 03-Oct-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)	0.0544		mg/kg	0.0500		109	71.5-134			

LCS (3100339-BS1)

Prepared & Analyzed: 03-Oct-23

Benzene	1.99	0.050	mg/kg	2.00		99.4	82.8-130			
Toluene	1.93	0.050	mg/kg	2.00		96.7	86-128			
Ethylbenzene	2.03	0.050	mg/kg	2.00		102	85.9-128			
m,p-Xylene	4.07	0.100	mg/kg	4.00		102	89-129			
o-Xylene	2.06	0.050	mg/kg	2.00		103	86.1-125			
Total Xylenes	6.13	0.150	mg/kg	6.00		102	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0525		mg/kg	0.0500		105	71.5-134			

LCS Dup (3100339-BS1)

Prepared & Analyzed: 03-Oct-23

Benzene	2.08	0.050	mg/kg	2.00		104	82.8-130	4.34	15.8	
Toluene	2.13	0.050	mg/kg	2.00		106	86-128	9.52	15.9	
Ethylbenzene	2.26	0.050	mg/kg	2.00		113	85.9-128	10.6	16	
m,p-Xylene	4.55	0.100	mg/kg	4.00		114	89-129	11.2	16.2	
o-Xylene	2.28	0.050	mg/kg	2.00		114	86.1-125	10.2	16.7	
Total Xylenes	6.84	0.150	mg/kg	6.00		114	88.2-128	10.8	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0544		mg/kg	0.0500		109	71.5-134			

Batch 3100343 - Volatiles**Blank (3100343-BLK1)**

Prepared & Analyzed: 03-Oct-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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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

Volatile Organic Compounds by EPA Method 8021 - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3100343 - Volatiles**Blank (3100343-BLK1)**

Prepared & Analyzed: 03-Oct-23

Total BTEX	ND	0.300	mg/kg							
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Surrogate: 4-Bromofluorobenzene (PID)	0.0521		mg/kg	0.0500		104	71.5-134			
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LCS (3100343-BS1)

Prepared & Analyzed: 03-Oct-23

Benzene	1.98	0.050	mg/kg	2.00		98.9	82.8-130			
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Toluene	1.99	0.050	mg/kg	2.00		99.7	86-128			
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Ethylbenzene	1.93	0.050	mg/kg	2.00		96.4	85.9-128			
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m,p-Xylene	3.96	0.100	mg/kg	4.00		99.1	89-129			
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o-Xylene	1.88	0.050	mg/kg	2.00		93.9	86.1-125			
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Total Xylenes	5.84	0.150	mg/kg	6.00		97.4	88.2-128			
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Surrogate: 4-Bromofluorobenzene (PID)	0.0492		mg/kg	0.0500		98.5	71.5-134			
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LCS Dup (3100343-BS1)

Prepared & Analyzed: 03-Oct-23

Benzene	1.98	0.050	mg/kg	2.00		99.2	82.8-130	0.364	15.8	
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Toluene	2.03	0.050	mg/kg	2.00		101	86-128	1.70	15.9	
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Ethylbenzene	1.94	0.050	mg/kg	2.00		97.2	85.9-128	0.877	16	
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m,p-Xylene	3.96	0.100	mg/kg	4.00		99.0	89-129	0.0685	16.2	
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o-Xylene	1.87	0.050	mg/kg	2.00		93.6	86.1-125	0.381	16.7	
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Total Xylenes	5.83	0.150	mg/kg	6.00		97.2	88.2-128	0.169	16.3	
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Surrogate: 4-Bromofluorobenzene (PID)	0.0501		mg/kg	0.0500		100	71.5-134			
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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 3100340 - General Prep - Organics**Blank (3100340-BLK1)**

Prepared & Analyzed: 03-Oct-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	57.1		mg/kg	50.0		114	48.2-134			
Surrogate: 1-Chlorooctadecane	75.6		mg/kg	50.0		151	49.1-148			S-04

LCS (3100340-BS1)

Prepared & Analyzed: 03-Oct-23

GRO C6-C10	205	10.0	mg/kg	200		103	66.4-123			
DRO >C10-C28	218	10.0	mg/kg	200		109	66.5-118			
Total TPH C6-C28	423	10.0	mg/kg	400		106	77.6-123			
Surrogate: 1-Chlorooctane	60.4		mg/kg	50.0		121	48.2-134			
Surrogate: 1-Chlorooctadecane	73.8		mg/kg	50.0		148	49.1-148			

LCS Dup (3100340-BS1)

Prepared & Analyzed: 03-Oct-23

GRO C6-C10	194	10.0	mg/kg	200		96.8	66.4-123	5.69	17.7	
DRO >C10-C28	201	10.0	mg/kg	200		101	66.5-118	8.08	21	
Total TPH C6-C28	395	10.0	mg/kg	400		98.7	77.6-123	6.92	18.5	
Surrogate: 1-Chlorooctane	56.2		mg/kg	50.0		112	48.2-134			
Surrogate: 1-Chlorooctadecane	76.8		mg/kg	50.0		154	49.1-148			S-04

Batch 3100344 - General Prep - Organics**Blank (3100344-BLK1)**

Prepared: 03-Oct-23 Analyzed: 04-Oct-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	54.2		mg/kg	50.0		108	48.2-134			
Surrogate: 1-Chlorooctadecane	56.8		mg/kg	50.0		114	49.1-148			

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Analytical Results For:

ENSOLUM, LLC
705 W WADLEY AVE.
MIDLAND TX, 79705

Project: CHISO 14 STATE JET PUMP
Project Number: 03C2012059 (32.3850755-103
Project Manager: HADLIE GREEN
Fax To:

Reported:
07-Nov-23 16:45

Petroleum Hydrocarbons by GC FID - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch 3100344 - General Prep - Organics**LCS (3100344-BS1)**

Prepared: 03-Oct-23 Analyzed: 04-Oct-23

GRO C6-C10	204	10.0	mg/kg	200		102	66.4-123		
DRO >C10-C28	199	10.0	mg/kg	200		99.3	66.5-118		
Total TPH C6-C28	403	10.0	mg/kg	400		101	77.6-123		
Surrogate: 1-Chlorooctane	58.0		mg/kg	50.0		116	48.2-134		
Surrogate: 1-Chlorooctadecane	59.9		mg/kg	50.0		120	49.1-148		

LCS Dup (3100344-BSD1)

Prepared: 03-Oct-23 Analyzed: 04-Oct-23

GRO C6-C10	201	10.0	mg/kg	200		100	66.4-123	1.65	17.7
DRO >C10-C28	201	10.0	mg/kg	200		101	66.5-118	1.19	21
Total TPH C6-C28	402	10.0	mg/kg	400		100	77.6-123	0.240	18.5
Surrogate: 1-Chlorooctane	55.5		mg/kg	50.0		111	48.2-134		
Surrogate: 1-Chlorooctadecane	57.7		mg/kg	50.0		115	49.1-148		

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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.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC Project Manager: Hadie Green Address: 101 N. Marland St # 400 City: Midland State: TX Zip: 79701 Phone #: 432-551-8895 Fax #: Project #: 03C2012059 Project Owner: Project Name: Chisota State Jet Pump Excavation Project Location: 32.3850755, -103.4358097 Sampler Name: Marianna O'Dell		BILL TO P.O. #: Company: BTA Oil Attn: Kelton Beaird Address: 104 S Pecross St City: Midland State: TX Zip: 79701 Phone #: Fax #:		ANALYSIS REQUEST	
FOR LAB USE ONLY		MATRIX (G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:		PRESERV ACID/BASE: ICE / COOL OTHER:	
Lab I.D. Sample I.D.		Depth (feet)		DATE TIME	
H235385 *		3'		10/2/23 13:05	
1 FSD424		C 1		X	
2 FSD425		C 1		X	
3 SMD423		C 1		X	
4 FSD426		C 1		X	
5 FSD427		C 1		X	
6 FSD428		C 1		X	
7 SMD424		C 1		X	
8 SMD425		C 1		X	
9 FSD429		C 1		X	
10 FSD430		C 1		X	
11 FSD431		C 1		X	
12 FSD432		C 1		X	
13 FSD433		C 1		X	
14 FSD434		C 1		X	
15 FSD435		C 1		X	
16 FSD436		C 1		X	
17 FSD437		C 1		X	
18 FSD438		C 1		X	
19 FSD439		C 1		X	
20 FSD440		C 1		X	
21 FSD441		C 1		X	
22 FSD442		C 1		X	
23 FSD443		C 1		X	
24 FSD444		C 1		X	
25 FSD445		C 1		X	
26 FSD446		C 1		X	
27 FSD447		C 1		X	
28 FSD448		C 1		X	
29 FSD449		C 1		X	
30 FSD450		C 1		X	
31 FSD451		C 1		X	
32 FSD452		C 1		X	
33 FSD453		C 1		X	
34 FSD454		C 1		X	
35 FSD455		C 1		X	
36 FSD456		C 1		X	
37 FSD457		C 1		X	
38 FSD458		C 1		X	
39 FSD459		C 1		X	
40 FSD460		C 1		X	
41 FSD461		C 1		X	
42 FSD462		C 1		X	
43 FSD463		C 1		X	
44 FSD464		C 1		X	
45 FSD465		C 1		X	
46 FSD466		C 1		X	
47 FSD467		C 1		X	
48 FSD468		C 1		X	
49 FSD469		C 1		X	
50 FSD470		C 1		X	
51 FSD471		C 1		X	
52 FSD472		C 1		X	
53 FSD473		C 1		X	
54 FSD474		C 1		X	
55 FSD475		C 1		X	
56 FSD476		C 1		X	
57 FSD477		C 1		X	
58 FSD478		C 1		X	
59 FSD479		C 1		X	
60 FSD480		C 1		X	
61 FSD481		C 1		X	
62 FSD482		C 1		X	
63 FSD483		C 1		X	
64 FSD484		C 1		X	
65 FSD485		C 1		X	
66 FSD486		C 1		X	
67 FSD487		C 1		X	
68 FSD488		C 1		X	
69 FSD489		C 1		X	
70 FSD490		C 1		X	
71 FSD491		C 1		X	
72 FSD492		C 1		X	
73 FSD493		C 1		X	
74 FSD494		C 1		X	
75 FSD495		C 1		X	
76 FSD496		C 1		X	
77 FSD497		C 1		X	
78 FSD498		C 1		X	
79 FSD499		C 1		X	
80 FSD500		C 1		X	
81 FSD501		C 1		X	
82 FSD502		C 1		X	
83 FSD503		C 1		X	
84 FSD504		C 1		X	
85 FSD505		C 1		X	
86 FSD506		C 1		X	
87 FSD507		C 1		X	
88 FSD508		C 1		X	
89 FSD509		C 1		X	
90 FSD510		C 1		X	
91 FSD511		C 1		X	
92 FSD512		C 1		X	
93 FSD513		C 1		X	
94 FSD514		C 1		X	
95 FSD515		C 1		X	
96 FSD516		C 1		X	
97 FSD517		C 1		X	
98 FSD518		C 1		X	
99 FSD519		C 1		X	
100 FSD520		C 1		X	
101 FSD521		C 1		X	
102 FSD522		C 1		X	
103 FSD523		C 1		X	
104 FSD524		C 1		X	
105 FSD525		C 1		X	
106 FSD526		C 1		X	
107 FSD527		C 1		X	
108 FSD528		C 1		X	
109 FSD529		C 1		X	
110 FSD530		C 1		X	
111 FSD531		C 1		X	
112 FSD532		C 1		X	
113 FSD533		C 1		X	
114 FSD534		C 1		X	
115 FSD535		C 1		X	
116 FSD536		C 1		X	
117 FSD537		C 1		X	
118 FSD538		C 1		X	
119 FSD539		C 1		X	
120 FSD540		C 1		X	
121 FSD541		C 1		X	
122 FSD542		C 1		X	
123 FSD543		C 1		X	
124 FSD544		C 1		X	
125 FSD545		C 1		X	
126 FSD546		C 1		X	
127 FSD547		C 1		X	
128 FSD548		C 1		X	
129 FSD549		C 1		X	
130 FSD550		C 1		X	
131 FSD551		C 1		X	
132 FSD552		C 1		X	
133 FSD553		C 1		X	
134 FSD554		C 1		X	
135 FSD555		C 1		X	
136 FSD556		C 1		X	
137 FSD557		C 1		X	
138 FSD558		C 1		X	
139 FSD559		C 1		X	
140 FSD560		C 1		X	
141 FSD561		C 1		X	
142 FSD562		C 1		X	
143 FSD563		C 1		X	
144 FSD564		C 1		X	
145 FSD565		C 1		X	
146 FSD566		C 1		X	
147 FSD567		C 1		X	
148 FSD568		C 1		X	
149 FSD569		C 1		X	
150 FSD570		C 1		X	
151 FSD571		C 1		X	
152 FSD572		C 1		X	
153 FSD573		C 1		X	
154 FSD574		C 1		X	
155 FSD575		C 1		X	
156 FSD576		C 1		X	
157 FSD577		C 1		X	
158 FSD578		C 1		X	
159 FSD579		C 1		X	
160 FSD580		C 1		X	
161 FSD581		C 1		X	
162 FSD582		C 1		X	
163 FSD583		C 1		X	
164 FSD584		C 1		X	
165 FSD585		C 1		X	
166 FSD586		C 1		X	
167 FSD587		C 1		X	
168 FSD588		C 1		X	
169 FSD589		C 1		X	
170 FSD590		C 1		X	
171 FSD591		C 1		X	
172 FSD592		C 1		X	
173 FSD593		C 1		X	
174 FSD594		C 1		X	
175 FSD595		C 1		X	
176 FSD596		C 1		X	
177 FSD597		C 1		X	
178 FSD598		C 1		X	
179 FSD599		C 1		X	
180 FSD600		C 1		X	
181 FSD601		C 1		X	
182 FSD602		C 1		X	
183 FSD603		C 1		X	
184 FSD604		C 1		X	
185 FSD605		C 1		X	
186 FSD606		C 1		X	
187 FSD607		C 1		X	
188 FSD608		C 1		X	
189 FSD609		C 1		X	
190 FSD610		C 1		X	
191 FSD611		C 1		X	
192 FSD612		C 1		X	
193 FSD613		C 1		X	
194 FSD614		C 1		X	
195 FSD615		C 1		X	
196 FSD6					

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 27 of 27



APPENDIX F

Reclamation Plan

BTA Oil Producers, LLC
Remediation Work Plan
Chiso 14 State Jet Pump and Excavation

RECLAMATION PLAN

Portions of the release occurred off pad in the pasture and as such, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the off pad area 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. The following Reclamation Plan addresses reclamation of the off-pad area:

- The excavation will be backfilled with locally sourced caliche and topsoil to match surrounding grade. Approximately 1 foot of topsoil will be placed on top of the caliche to support vegetative growth within the disturbed area;
- Soil in the vicinity of the release include: poorly graded sand, fine to medium-grained with trace silt and clay;
- The backfilled areas will be seeded utilizing a weed-free seed mix designed by the NMSLO to meet reclamation standards for this region, which will be: Sandy Loam (SL) seed mixture as described in the NMSLO *Revegetation Guidelines Handbook for Southeastern New Mexico*, dated 2018;
- The seed mixture will be distributed with either a push broadcaster seed spreader, tractor operated broadcast seed spreader, and/or drill seeding method(s);
- Application of the seed mixture will be at a coverage of 10 pounds of seeds per acre of reclaimed pasture with distribution by a drilling method or 20 pounds of seeds per acre of reclaimed pasture with distribution by a broadcast method;
- If necessary, erosion control management will potentially include:
 - The placement of wattles in areas with a propensity for high run off rates;
 - Straw cover if high winds are anticipated to support moisture retention and limit wind from blowing seeds away before they have had time to germinate; and/or
 - Other erosional control best management practices (BMP) as necessary to support timely and healthy regrowth of vegetation in disturbed areas;
- Backfilling of the excavation will be completed upon approval of this *Closure Request* and prior to reseeding efforts;
- Seeding is anticipated to be completed in the Fall when temperatures and precipitation is most conducive for vegetation growth. In general, seeding should occur approximately one month after the last frost in the Spring up until approximately one month prior to the first fall frost. NMSLO has recognized the optimal time to seed is between July and early September, which will be adhered to for this Site;
- If seeding occurs outside of the 180 days approved in the current fully executed ROE Permit, a new ROE Permit will be executed prior to entering the pasture for reclamation activities;
- Annual inspections (at a minimum), will take place on the location until revegetation is consistent with local natural vegetation density. The Site will be inspected the following Spring/Fall to assess the success of regrowth. If necessary, an additional application of the NMSLO-approved pure live seed mixture will be applied as well as any needed BMPs will be installed to support growth and limit erosion;

Upon completion of revegetation, a copy of the C-103 submitted to NMOCD will also be submitted to NMSLO for final inspection and release.



APPENDIX G

NMOCD Correspondence

Dan Moir

From: Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>
Sent: Friday, June 2, 2023 11:55 PM
To: Hadlie Green; Enviro, OCD, EMNRD
Cc: Tacoma Morrissey; Peter Van Patten; Kelton Beaird; Nathan Sirgo
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 06/05/2023

[**EXTERNAL EMAIL**]

Received.

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.

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



From: Hadlie Green <hgreen@ensolum.com>
Sent: Friday, June 2, 2023 9:25 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Peter Van Patten <pvanpatten@ensolum.com>; Kelton Beaird <KBeaird@btaoil.com>; Nathan Sirgo <nsirgo@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 06/05/2023

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 June 5, 2023.

- Harroun East Tank Battery / nAPP2202845563
 - Sampling Date: 6/5/2023 @ 9:00 AM MST
- Vaca Draw 9418 JV-P 001 / nCH1835540209
 - Sampling Date: 6/6/2023 @ 9:00 AM MST
- Carrasco 14-1H / nAPP2313656375
 - Sampling Date: 6/6/2023 @ 9:00 AM MST
- Chiso 14 State Jet Pump Excavation / nAPP2205837214

- Sampling Date: 6/5/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC

in f 

Dan Moir

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Friday, June 9, 2023 4:22 PM
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 06/12/2023

[**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 ensure 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](http://www.emnrd.nm.gov)



From: Hadlie Green <hgreen@ensolum.com>
Sent: Thursday, June 8, 2023 9:14 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Kelton Beaird <KBeaird@btaoil.com>; Nathan Sirgo <nsirgo@btaoil.com>; Peter Van Patten <pvanpatten@ensolum.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 06/12/2023

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 June 12, 2023.

- Chiso 14 State Jet Pump Excavation / nAPP2205837214
 - Sampling Date: 6/12-13/2023 @ 9:00 AM MST
- Chiso 14 State 8711 #003H Wellhead / nAB1917652490
 - Sampling Date: 6/14-15/2023 @ 9:00 AM MST
- Chiso 14 State 8711 Flowline / nRM2034960665

- Sampling Date: 6/14-15/2023 @ 9:00 AM MST
- Mesa 30 31 Tank Battery / nAPP2106930621
 - Sampling Date: 6/14/2023 @ 9:00 AM MST
- Rojo 10-13/34-37 / nAPP2313055442
 - Sampling Date: 6/15-16/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC

in f 

Dan Moir

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Thursday, June 29, 2023 10:48 PM
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 07/3/2023

[**EXTERNAL EMAIL**]

Hadlie,

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

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](http://www.emnrd.nm.gov)



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

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

All,

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

- Vacuum SWD H 35 Pipeline / nAPP2313058428
 - Sampling Date: 7/5/2023 @ 9:00 AM MST
- Chiso 14 State Jet Pump Excavation / nAPP2205837214
 - Sampling Date: 7/6/2023 @ 9:00 AM MST
- Mesa B #25 / nAPP2112744758
 - Sampling Date: 7/6-7/2023 @ 9:00 AM MST

- Mesa #16H Flowline / nAPP2123156473
 - Sampling Date: 7/7/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC

in f 

Dan Moir

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Wednesday, July 19, 2023 10:52 PM
To: Hadlie Green
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD; Velez, Nelson, EMNRD
Subject: RE: [EXTERNAL] BTA - Sampling Notification - Week of 07/24/2023

[**EXTERNAL EMAIL**]

Good afternoon Hadlie,

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

Thank you,

Shelly

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

From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, July 19, 2023 1:36 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Tacoma Morrissey <tmorrissey@ensolum.com>; Kelton Beaird <KBeaird@btaoil.com>
Subject: [EXTERNAL] BTA - Sampling Notification - Week of 07/24/2023

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 locations the week of July 24, 2023.

- Chiso 14 State Jet Pump and Excavation / nAPP2205837214
 - Sampling Date: 7/25-26/2023 @ 9:00 AM MST
- Mesa #2H Tank Battery / NRM2026945362
 - Sampling Date: 7/27/2023 @ 9:00 AM MST
- Mesa B #2 Tank Battery / nAPP2113973789
 - Sampling Date: 7/28/2023 @ 9:00 AM MST

Thank you,



Hadlie Green

Project Geologist

432-557-8895

hgreen@ensolum.com

Ensolum, LLC

in f 



APPENDIX H

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	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
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) nAPP2205837214
Contact mailing address: 104 S. Pecos St., Midland, TX 79701	

Location of Release Source

Latitude: 32.38511 Longitude: -103.43594

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Chiso 14 State Jet Pump and Excavation	Site Type: Tank Battery
Date Release Discovered: 2/26/2022	API# (if applicable) Nearest well:

Unit Letter	Section	Township	Range	County
P	14	22S	34E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☒ Private (Name:) Merchant Livestock Company

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 165 BBL	Volume Recovered (bbls) 70 BBL
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Jet Pump Failure.

A plug on the manifold of a Jet Pump failed and allowed water from the supply tank to drain from the pump and proceed westward directly into an active excavation being conducted to remove previously contaminated soil. The volume of recovered water was taken from the excavation. The estimate of the volume of water released was calculated from tank gauge data (attached).

Form C-141


Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The volume of the release exceeds 25 BBL.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by filing a Notice of Release (NOR) on the NMOCD Permitting website on 2/27/2022. The Incident ID listed above was assigned after the NOR was acknowledged by the NMOCD.	

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. Printed Name: Bob Hall Title: Environmental Manager Signature:  Date: 3/8/2022 email: bhall@btaoil.com Telephone: 432-682-3753
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	nAPP2205837214
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u><50</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody


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

Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2205837214
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: ____12/1/2023____
email: __KBeaird@btail.com__ Telephone: __432-312-2203__

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2205837214
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 19.15.29.11 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 District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kelton Beaird Title: Environmental Manager
Signature:  Date: 12/1/2023
email: KBeaird@btaoil.com Telephone: 432-312-2203

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



December 1, 2023

New Mexico Oil Conservation Division

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

**Re: Closure Request
Chiso 14 State Jet Pump and Excavation
Incident Number nAPP2205837214
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of BTA Oil Producers, LLC (BTA), has prepared this *Closure Request* to document assessment, delineation, excavation, and soil sampling activities performed at the Chiso 14 State Jet Pump (Site). The purpose of the Site activities was to address impacts to soil resulting from a release of produced water at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, BTA is submitting this *Closure Request* describing Site assessment, delineation, and excavation activities that have occurred and requesting closure for Incident Number nAPP2205837214.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit P, Section 14, Township 22 South, Range 34 East, in Lea County, New Mexico (32.38511°, -103.43594°) and is associated with oil and gas exploration and production operations on private land owned by Merchant Livestock Company.

On February 26, 2022, a plug on a jet pump failed and allowed water from the supply tank to drain from the pump and proceed westward directly into an open excavation associated with a previous release. Approximately 165 barrels (bbls) of produced water were released. A vacuum truck was immediately dispatched to the Site and recovered approximately 70 bbls of produced water from the open excavation. BTA reported the release to the New Mexico Oil Conservation Division (NMOCD) through the online Notice of Release (NOR) portal on February 27, 2022, and submitted a Release Notification Form C-141 (Form C-141) on March 8, 2022. The release was assigned Incident Number nAPP2205837214.

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.

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

BTA Oil Producers, LLC
Closure Request
Chiso 14 State Jet Pump and Excavation

- Total Petroleum Hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

According to a *Remediation Workplan*, prepared by Tetra Tech, Inc. (Tetra Tech) and submitted to NMOCD on May 12, 2023, the depth of the open excavation affected by the February 2022 release ranged between 3 feet and 9 feet below ground surface (bgs). Following the February 2022 release, the excavation was extended to depths ranging from 3 feet to 19 feet bgs between February 28, 2022, and June 7, 2022. Following excavation activities, a 20-mil poly liner was installed within the open excavation at a depth of 19 feet bgs. Due to the presence of the jet pump, Tetra Tech proposed vertical and horizontal delineation of the soil around the jet pump and collection of new confirmation soil samples in the excavated area. The May 2023 *Remediation Workplan* was approved by NMOCD on June 13, 2023, and is included as Appendix A.

Between June 8 and July 24, 2023, Ensolum personnel were at the Site to oversee additional excavation, delineation, and confirmation sampling in accordance with Tetra Tech's approved *Remediation Workplan*. Excavation of impacted soil was completed to the maximum extent possible; however, residual TPH and chloride-impacted soil remained under and around production equipment, pipelines, and the jet pump. Approximately 662 cubic yards of soil were left in place due to the presence of the jet pump. During August 2023, the jet pump was removed and on September 11, 2023, BTA submitted a *Remediation Work Plan (Work Plan)* proposing additional vertical delineation, excavation of impacted soil near the jet pump, and final confirmation sampling. The *Work Plan* was reviewed and approved by NMOCD on November 17, 2023 and is included as Appendix B. What follows describes all delineation, soil sampling, and excavation activities completed at the Site in accordance with the approved *Work Plans*.

CULTURAL RESOURCES SURVEYS

The excavation and liner installation were initiated prior to implementation of the Cultural Properties Protection Rule on December 1, 2022. The excavation occurred less than 30 feet from the edge of the well pad disturbance area and appears to be within the clearance buffer of the original siting. No additional cultural resource surveys were completed in connection with this release.

EXCAVATION AND DELINEATION ACTIVITIES

Between June 8 and July 24, 2023, Ensolum personnel were at the Site to oversee additional excavation and soil sampling activities based on previous soil sample analytical results, field screening, and visible observations documented in Tetra Tech's *Remediation Workplan*. Excavation activities were performed utilizing a track hoe and transport vehicles. To direct excavation activities, soil was screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. During excavation activities, the poly liner that was installed at 19 feet bgs was removed and is no longer present in the excavation. The excavation was completed to depths ranging from 1.5 feet to 19 feet bgs. Photographic documentation of the excavation activities is included in Appendix C.

Following removal of impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewalls 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 FS23 were collected from the floor of the excavation at depths ranging from 1.5 feet to 19 feet bgs. Composite soil samples SW01 through SW22 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 19 feet bgs.

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

Laboratory analytical results for the excavation soil samples indicated all COC concentrations were compliant with the Site Closure Criteria except for the following floor and sidewall soil samples:

- Floor Soil Samples: FS18 and FS20 through FS23
- Sidewall Soil Samples: SW07, SW13 through SW15, SW21, and SW22

Since all impacted soil could not be safely excavated at that time, areas around the jet pump and production equipment were fully delineated. Delineation soil samples H-1 through H-6 were collected outside of the release extent, at a depth of 0.5 feet bgs, to define the lateral extent of the release. Six soil borings (AH-1 through AH-6) were advanced around the jet pump to depths ranging from 1-foot to 6 feet bgs to define the vertical extent of impacted soil. Delineation soil samples were collected from the soil borings at depths ranging from 1-foot to 6 feet bgs. The delineation soil samples were field screened for VOCs and chloride. Field screening results and observations for the soil borings were logged on lithologic/soil sampling logs, which are included in Appendix D. The delineation soil sample locations are depicted on Figure 2.

Laboratory analytical results indicated all COC concentrations in lateral delineation soil samples H-1 through H-6 were compliant with the Site Closure Criteria, confirming the lateral extent of the release to the north, east, and south of the jet pump. The chloride concentration in vertical delineation soil samples AH-2 through AH-5 exceeded the Closure Criteria at depths ranging from 2 feet to 3.5 feet bgs; all terminal samples, collected at depths ranging from 3 feet to 6 feet bgs were compliant with the Closure Criteria. Laboratory analytical results for vertical delineation soil sample AH-6 indicated the concentration of TPH exceeded the Closure Criteria at 2 feet bgs. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix E.

ADDITIONAL EXCAVATION

The excavation floor and sidewall soil samples that exceeded the Closure Criteria (FS18 and FS20 through FS23, SW07, SW13 through SW15, SW21, and SW22) were located within and around production equipment and pipelines on pad. Excavation of impacted soil was completed to the maximum extent practicable at the time without compromising the integrity of the equipment and/or pipelines as well as the safety of personnel onsite.

BTA subsequently moved the jet pump and associated production equipment to another location at the facility which allowed access to the impacted soil previously left in place. Ensolum personnel returned to the Site on October 2 and 3, 2023 to oversee excavation of the impacted soil in the previous location of the jet pump. Excavation soil samples FS18, FS20 through FS23, SW07, SW13 through SW15, SW21, SW22 and delineation soil samples AH-1, AH-2/AH-2B, AH-3/AH-3C, AH-4/AH-4A, AH5/AH-5B, and AH-6/AH-6A were removed during the excavation activities.

Following removal of the impacted soil, 5-point composite soil samples were collected every 200 square feet from the floor and sidewall of the final excavation extent. Confirmation soil samples FS24 through FS33 were collected from the floor of the excavation at depths ranging from 3 feet to 6 feet bgs. Confirmation soil samples SW23 through SW29 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 6 feet bgs. The excavation extent and excavation soil sample

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locations are presented on Figure 3. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Appendix E.

The final excavation extent measured approximately 5,800 square feet in areal extent. A total of approximately 1,700 cubic yards of impacted soil were removed during all excavation activities. The impacted soil was transported and properly disposed of at the R360 Environmental Solutions in Hobbs, New Mexico.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address the February 26, 2022, release of produced water. Laboratory analytical results for excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria. Based on the soil sample analytical results, no further remediation is required. Portions of the release occurred off pad in the pasture. As such, the disturbed pasture area will be reclaimed following the Reclamation Plan in Appendix F.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. BTA believes the remedial actions completed are protective of human health, the environment, and groundwater. As such, BTA respectfully requests closure for Incident Number nAPP2205837214. Notifications submitted to the NMOCD are included in Appendix G and the final Form C-141 is included in Appendix H.

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

Sincerely,
Ensolum, LLC



Tacoma Morrissey, M.S.
Senior Geologist



Daniel R. Moir, PG
Senior Managing Geologist

cc: Kelton Beaird, BTA
Merchant Livestock Company

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Tetra Tech, May 12, 2023, <i>Remediation Workplan</i>
Appendix B	September 11, 2023, <i>Remediation Work Plan</i>
Appendix C	Photographic Log
Appendix D	Lithologic/Soil Sampling Logs
Appendix E	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix F	Reclamation Plan
Appendix G	NMOCD Correspondence
Appendix H	Final C-141

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 293026

QUESTIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number:
	293026
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2205837214
Incident Name	NAPP2205837214 CHISO 14 STATE JET PUMP AND EXCAVATION @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Facility	[fAPP2129434580] Chiso State 14

Location of Release Source	
Please answer all the questions in this group.	
Site Name	CHISO 14 STATE JET PUMP AND EXCAVATION
Date Release Discovered	02/26/2022
Surface Owner	Private

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure Pump Produced Water Released: 165 BBL Recovered: 70 BBL Lost: 95 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Jet Pump Failure. A plug on the manifold of a Jet Pump failed and allowed water from the supply tank to drain from the pump and proceed westward directly into an active excavation being conducted to remove previously contaminated soil. The volume of recovered water was taken from the excavation. The estimate of the volume of water released was calculated from tank gauge data.

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

District IV

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

State of New Mexico
Energy, Minerals and Natural Resources
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Action 293026

QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:	260297
	Action Number:	293026
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

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 release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: BTA ENV Title: Environmental Manager Email: kbeaird@btaoil.com Date: 12/11/2023
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Phone:(575) 393-6161 Fax:(575) 393-0720

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811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

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

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Energy, Minerals and Natural Resources
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1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 3

Action 293026

QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number: 293026
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride	(EPA 300.0 or SM4500 Cl B)	480
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	0
GRO+DRO	(EPA SW-846 Method 8015M)	0
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	02/26/2022
On what date will (or did) the final sampling or liner inspection occur	10/03/2023
On what date will (or was) the remediation complete(d)	10/03/2023
What is the estimated surface area (in square feet) that will be reclaimed	5800
What is the estimated volume (in cubic yards) that will be reclaimed	5800
What is the estimated surface area (in square feet) that will be remediated	5800
What is the estimated volume (in cubic yards) that will be remediated	5800

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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1625 N. French Dr., Hobbs, NM 88240
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1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 4

Action 293026

QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:	260297
	Action Number:	293026
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Remediation Plan (continued)**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	R360 Artesia LLC LANDFARM [FEEM0112340644]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: kbeaird@btaoil.com Date: 12/14/2023
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The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 5

Action 293026

QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:
	260297
	Action Number:
	293026
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

District I

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

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1000 Rio Brazos Rd., Aztec, NM 87410
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1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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Energy, Minerals and Natural Resources
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1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 6

Action 293026

QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID:	260297
	Action Number:	293026
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	293024
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	07/25/2023
What was the (estimated) number of samples that were to be gathered	15
What was the sampling surface area in square feet	5800

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	5800
What was the total volume (cubic yards) remediated	1700
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	5800
What was the total volume (in cubic yards) reclaimed	5800
Summarize any additional remediation activities not included by answers (above)	All soil exceeding the most stringent Table I Closure Criteria has been removed. The excavation has been backfilled with non-waste containing material. Areas not needed for ongoing production activities will be reseeded within 90 days of approval.

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

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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: BTA ENSOLUM Title: Environmental Manager Email: kbeaird@btaoil.com Date: 12/14/2023
--	--

District I
1625 N. French Dr., Hobbs, NM 88240
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District II
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Santa Fe, NM 87505

QUESTIONS, Page 7

Action 293026

QUESTIONS (continued)

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 293026
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 293026

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 293026
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	2/29/2024