



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.

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## 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

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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.

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## 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.

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## 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.

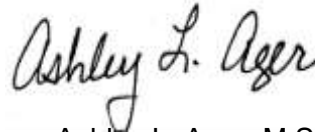
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If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or [tmorrissey@ensolum.com](mailto:tmorrissey@ensolum.com).

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

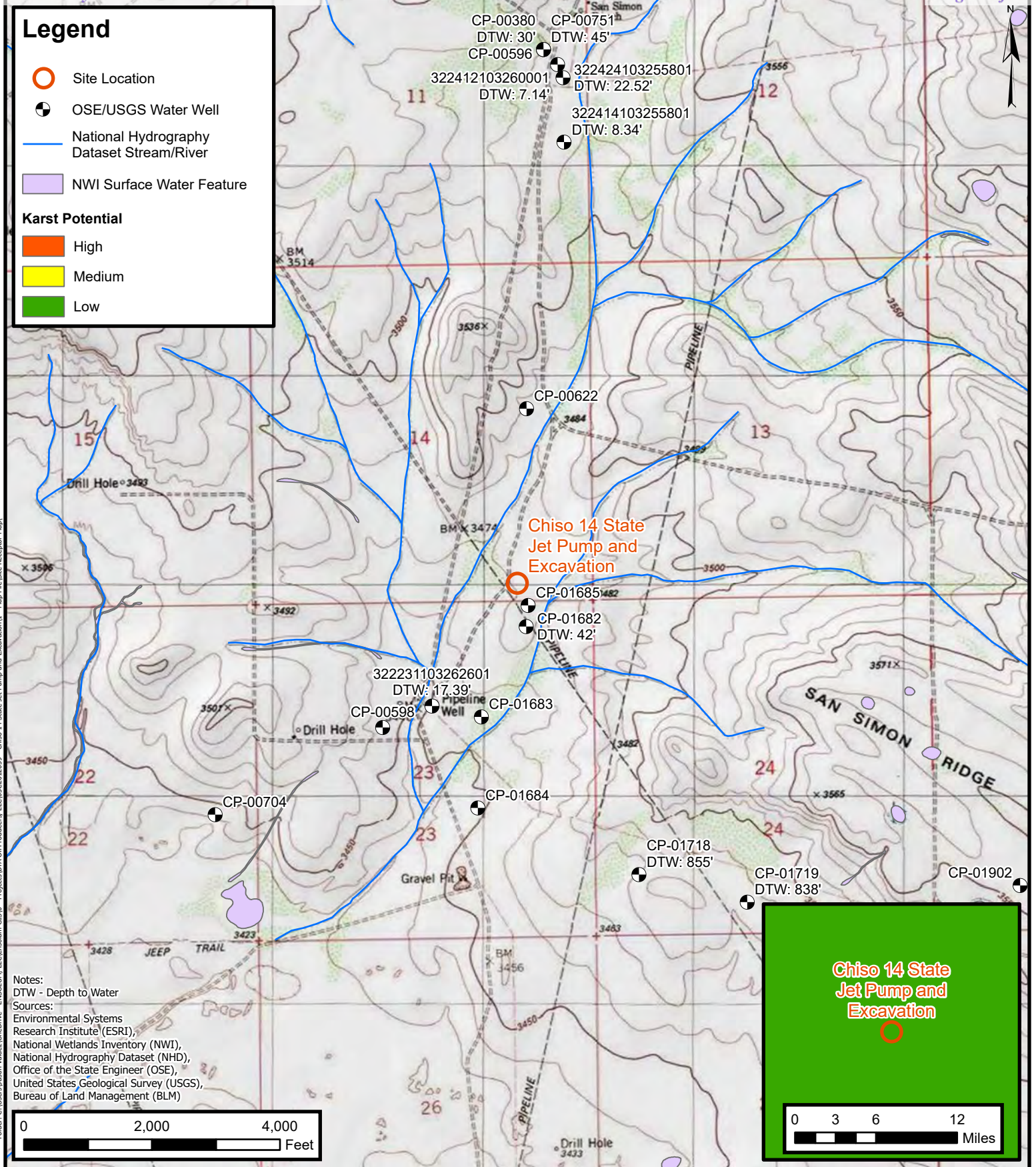
Appendices:

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





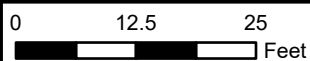


**Legend**

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Exceeding Closure Criteria
- Excavation Floor Sample in Compliance with Closure Criteria
- Excavation Sidewall Sample in Compliance with Closure Criteria
- Excavation Floor Sample with Concentrations Exceeding Closure Criteria
- Excavation Sidewall Sample with Concentrations Exceeding Closure Criteria
- Excavation Extent



Notes:  
Sample ID @ Depth Below Ground Surface.



Sources: Environmental Systems Research Institute (ESRI)



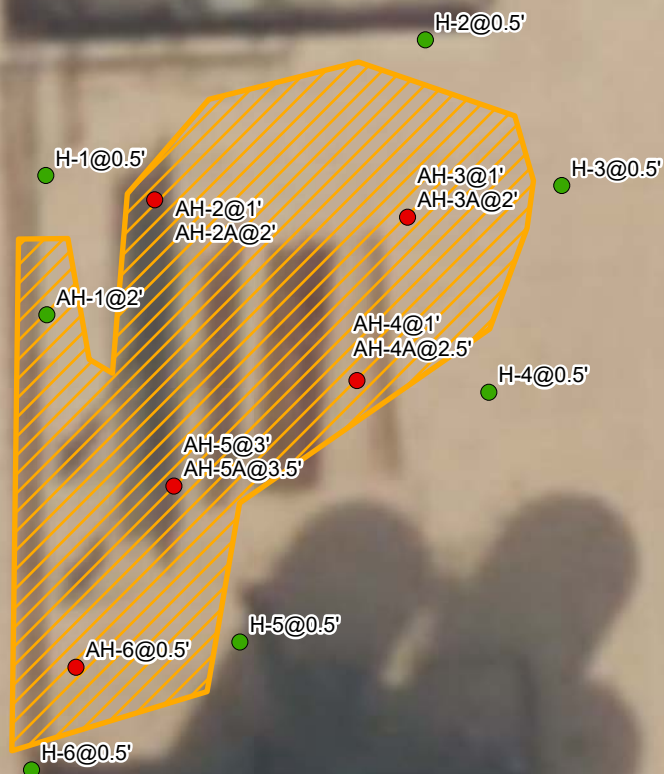
## Excavation Soil Sample Locations

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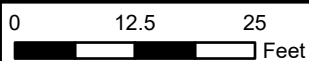
**FIGURE**  
**2**

**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.



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
<del>FS06</del>	<del>06/13/2023</del>	<del>7</del>	<del>&lt;0.050</del>	<del>&lt;0.300</del>	<del>&lt;10.0</del>	<del>860</del>	<del>204</del>	<del>860</del>	<del>1,064</del>	<del>32.0</del>
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	<b>10,400</b>
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	<b>456</b>	400
FS21	06/13/2023	1.5	<0.050	<0.300	<10.0	25.6	<10.0	25.6	25.6	<b>736</b>
FS22	07/27/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>7,330</b>
FS23	07/24/2023	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>1,170</b>





**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**  
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Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I 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	<b>9,600</b>
AH-2A	07/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>3,440</b>
AH-3	07/06/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>2,520</b>
AH-3A	07/06/2023	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>2,080</b>
AH-4	07/06/2023	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>5,840</b>
AH-4A	07/06/2023	2.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>1,440</b>
AH-5	07/06/2023	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>6,130</b>
AH-5A	07/06/2023	3.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>2,560</b>
AH-6	07/06/2023	2	<0.050	<0.300	<10.0	115	20.8	115	<b>136</b>	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](http://www.ose.state.nm.us)

2019 SEP 11 10:46:30 AM  
STATE OF NEW MEXICO  
OFFICE OF THE STATE ENGINEER

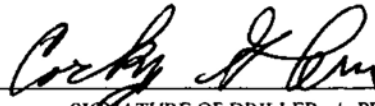
1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) CP-1682-POD1 South 2		WELL TAG ID NO. 2062A		OSE FILE NO(S). CP-1682			
	WELL OWNER NAME(S) Merchant Livestock Company/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) 575-398-2424			
	WELL OWNER MAILING ADDRESS PO Box 692				CITY Tatum	STATE NM	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:					TOTAL ESTIMATED WELL YIELD (gpm): 15.00	
<input checked="" type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:						
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:  <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">             SIGNATURE OF DRILLER / PRINT SIGNED NAME         </div> <div style="text-align: center;">           Corky Glenn            DATE         </div> </div>					

FOR OSE INTERNAL USE

WR-20 WELL RECORD &amp; 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

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**Photographic Log**

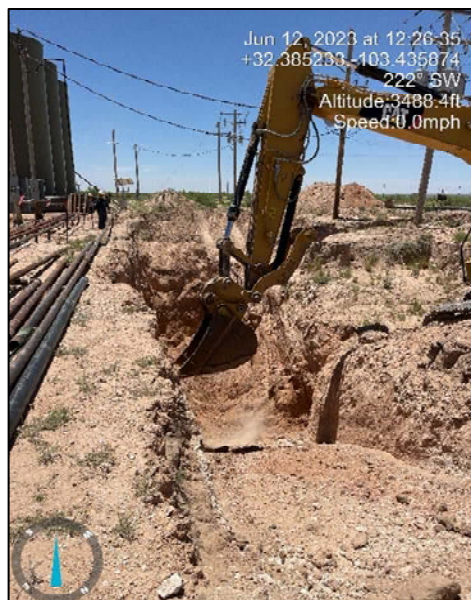
BTA Oil Producers, LLC

Chiso 14 State Jet Pump and Excavation

nAPP2205837214



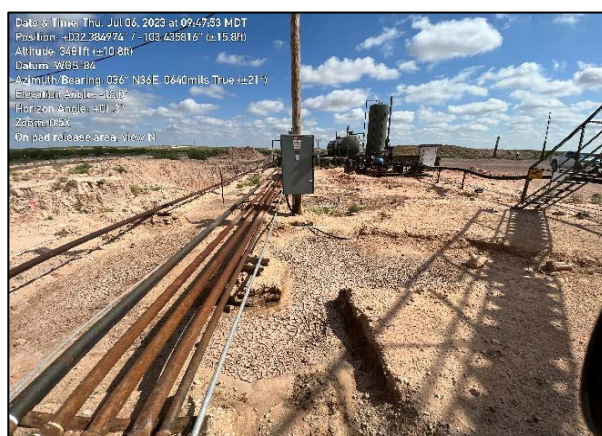
Photograph: 1 Date: 5/24/2023  
Description: Existing excavation prior to sloping  
View: North



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](http://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:	07/17/2023	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)**

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, 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)**

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	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)**

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) 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

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

---

### 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

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.

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

Project Manager: Healie Green

Address: 3122 Nat'l Parks Hwy

City: Carlsbad

Phone #: 432-557-8895

Project #: 0302012059

Project Name: Criso 14 State St Pump

Project Location: 32.38511, -103.43594

Sampler Name: Meredith Robert

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 :

MATRIX

PRESERV.

SAMPLING

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: BTA Oil

Attn: Kerton Beaird

Address: 104 S. Peers St

City: Midland

State: TX Zip: 79701

Phone #:

Fax #:

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: 7-12-23

Received By:

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

Relinquished By:

Date: 7-12-23

Received By:

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

Relinquished By:

Date: 7-12-23

Received By:

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

Delivered By: (Circle One)

Observed Temp. °C 28

Sample Condition Cool ☒ Intact ☒

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush ☒

Bacteria (only) ☐

Sample Condition Cool ☒ Intact ☒

Observed Temp. °C

Sampler - UPS - Bus - Other:

Corrected Temp. °C

Corrected Temp. °C

Thermometer ID #175

Correction Factor

Yes ☐ No ☐

Yes ☐ No ☐

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](http://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  
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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\*=Accredited Analyte

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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, 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	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



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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)**

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, 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)**

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, 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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\*=Accredited Analyte

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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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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 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)**

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, 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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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, 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	06/16/2023	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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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 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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**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)**

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	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, 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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**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, SM4500Cl-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)**

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) 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, 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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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, 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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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, SM4500CI-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)**

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	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)**

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, 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



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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)**

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) 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)**

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	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)**

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	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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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 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, 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	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, 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	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, 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, SM4500CI-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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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 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, 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)**

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, 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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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 16 14-19' (H233049-37)**

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	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, 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 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, 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

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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

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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: Tacoma Morrissey

Address: 3122 Nat'l Parks Hwy

City: Carlsbad

State: NM Zip: 88220

Phone #: 337-257-8301 Fax #:

Project #: 03C2012059 Project Owner:

Project Name: Chiso 14 State Jet Pump Excavation

Project Location: 32.38511, -103.43594

Sampler Name: Meredith Roberts

Fax #:

## BILL TO

P.O. #:

Company: BTA Oil

Attn: Kelton Beard

Address: 104 S. Pecos St

City: Midland

State: TX Zip: 79701

Phone #:

## ANALYSIS REQUEST

PAGE 1 OF 5

Lab I.D.	Sample I.D.	Depth (feet)	PRESERV.		DATE	TIME	SAMPLING		ANALYSIS REQUEST	
			(G)RAB OR (C)OMP.	# CONTAINERS			BTEX	Chlorides	TPH	
1233049	FS01	1'	X	1	6/13/23	1235	X	X	X	
2	FS02									
3	FS03									
4	FS04									
5	FS05									
6	FS06									
7	FS07									
8	FS08									
9	FS09									
10	FS10									

PLEASE NOTE: Labels and Damages. Cardholder liability and client's exclusive remedy for any claim arising from this contract or for any claim arising from the use of the services, 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 theories or otherwise.

Relinquished By:

Date: 6/14/23

Received By:

Verbal Result: ☐ Yes ☒ No

Add'l Phone #:

All Results are emailed. Please provide Email address:

tmorrissey@ensolum.com

mroberts@ensolum.com

REMARKS:

Incident #: NAPP2205837214

Delivered By: (Circle One)

Observed Temp.: 1.4

Sample Condition

CHECKED BY: (initials)

Turnaround Time:

Standard

Bacteria (only)

Sample Condition

Sampler - UPS - Bus - Other:

Corrected Temp.: -20

Cool Intact

Thermometer ID #113

Correction Factor: -0.5°C

Rush

Yes

Observed Temp.: °C

Corrected Temp.: °C

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





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:

Attn:

Address:

City:

State:

Phone #:

Fax #:

PAGE 2 of 5  
ANALYSIS REQUEST

FOR LAB USE ONLY		BILL TO		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: 6/14/23

Received By:

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

All Results are emailed. Please provide Email address:

Relinquished By: [Signature]

Date: 6/14/23

Received By: [Signature]

REMARKS: See Pg 1

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp.: -1.4

Corrected Temp.: -2.0

Sample Condition

Cool Intact ☒ Yes ☐ No

CHECKED BY: [Signature]

Turnaround Time:

Thermometer ID #113

Standard

Rush ☐

Bacteria (only) ☒

Cool Intact ☐

Sample Condition

Observed Temp.: ☐

Corrected Temp.: ☐

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





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(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	PRESERV	SAMPLING	DATE	TIME	BTEX	Chlorides	TPH
4233349	ES21	1.5'	C	1	SOIL	X		6/13/23	1230	X	X	X
23	SW01	0-4'			GROUNDWATER				1155			
23	SW02				WASTEWATER			6/12/23	1415			
24	SW03				SLUDGE			6/13/23	1200			
25	SW04				OTHER:			6/12/23	1420			
26	SW05				ACID/BASE:				1430			
27	SW06				ICE / COOL				1435			
28	SW07				OTHER:				1440			
29	SW08	4-7'										
30	SW09											

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Relinquished By: Meredith Date: 6/14/23 Time: 1345 Received By: Spokane Date: 6/14/23 Time: 1345

Delivered By: (Circle One) UPS Observed Temp. °C: -1.4 Sample Condition: Cool Intact CHECKED BY: CR Turnaround Time: Standard Bacteria (only) Sample Condition: Cool Intact

Sampler - UPS - Bus - Other: Corrected Temp. °C: -2.0 No Yes Thermometer ID #113 Correction Factor: -0.5°C No Yes Observed Temp. °C: -2.0

REMARKS: See Pg 1

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

All Results are emailed. Please provide Email address:

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





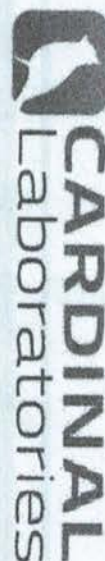
101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

PAGE 4 OF 5

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101 East Marland, Hobbs, NM 88240  
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### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

PAGE 5 OF 5

[illegible]



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](http://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)**

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	07/12/2023	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 BTEx	<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

---

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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 ANALYSIS REQUEST

<b>Company Name:</b> Ensolum, LLC <b>Project Manager:</b> Hadlie Green <b>Address:</b> 3122 Nati Parks Hwy <b>City:</b> Carlsbad <b>State:</b> NM <b>Zip:</b> 88220 <b>Phone #:</b> 432-557-8895 <b>Fax #:</b> <b>Project #:</b> 03C0012059 <b>Project Owner:</b> <b>Project Name:</b> Chise 14 State Jet Pump <b>Project Location:</b> 32.3851, -103.4394 <b>Sampler Name:</b> Meredith Roberts		<b>P.O. #:</b> <b>Company:</b> BTA Oil <b>Attn:</b> BMT Kelton Bealnd <b>Address:</b> 104 S. Pecos St. <b>City:</b> Midland <b>State:</b> TX <b>Zip:</b> 79701 <b>Phone #:</b> <b>Fax #:</b>	
<b>BILL TO</b>			
<b>ANALYSIS REQUEST</b>			
<b>Lab I.D.</b> H033554 <b>Sample I.D.</b> FS06A <b>Depth (feet)</b> 8'	<b>(G)RAB OR (C)OMP.</b> <input checked="" type="checkbox"/> 1 <b># CONTAINERS</b> GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :	<b>MATRIX</b> PRESERV SAMPLING	<b>DATE</b> 7/12/23 <b>TIME</b> 1010 <b>BTEX</b> Chlorides TPH
Relinquished By: <u>Meredith Roberts</u> Date: <u>7-12-23</u> Time: <u>1230</u> Received By: <u>Meredith Roberts</u> Date: <u>7-12-23</u> Time: <u>1230</u>			
Delivered By: (Circle One) Sampler - UPS - Bus - Other: Observed Temp. °C: <u>3.5</u> Corrected Temp. °C: Sample Condition: Cool Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Checked By: <u>MS</u> Turnaround Time: <u>Standard</u> Thermometer ID #44 <u>41024</u> <u>HR</u> Correction Factor: <u>0.00</u> Bacteria (only) Sample Condition: Cool Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Corrected Temp. °C:			
Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: All Results are emailed. Please provide Email address: hgreene@ensolum.com mroberts@ensolum.com REMARKS: Incident #: nAPP22058 37214			



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](http://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	Sampling Date:	07/24/2023
Reported:	07/31/2023	Sampling Type:	Soil
Project Name:	CHISO 14 STATE JET PUMP	Sampling Condition:	** (See Notes)
Project Number:	03C2012059	Sample Received By:	Tamara Oldaker
Project Location:	BTA ( 32.38511-103.43594 )		

**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

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**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

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 21 0-4' (H233846-03)**

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, 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, 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

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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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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.

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: Ensdlum		<b>BILL TO</b>		ANALYSIS REQUEST	
Project Manager: Hadlie Green		P.O. #:			
Address: 601 W. Marlandfield St #40		Company: BTA Oil			
City: Midland		Attn: Kelton Beard			
Phone #: 432-557-8895		Address: 104 S. Reas St			
Fax #: Project #:		City: Midland			
Project #: 03C2012059		State: TX Zip: 79701			
Project Owner:		Phone #: 432-682-3753			
Project Name: Chiss 14 State Jet Pump		Fax #:			
Project Location: 32.38511, -103.43594					
Sampler Name: Peter Van Patten					

Lab I.D.	Sample I.D.	Depth	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH	BTEX	Chlorides
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
1	FS21	4'	C	1							7-24-23	1005	X	X	X
2	FS22	4'	C	1								1010	X	X	X
3	SW21	0-4'	C	1								1015	X	X	X
4	SW22	0-4'	C	1								1020	X	X	X

*FOR LAB USE ONLY*

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising from this 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
Relinquished By:	Time: 1235	Received By:	Time:
Delivered By: (Circle One)	Observed Temp. °C: 7.3	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C:	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Turnaround Time:	Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>	Bacteria (only) <input type="checkbox"/>	Sample Condition <input type="checkbox"/>
Thermometer ID #140	Corrected Temp. °C:	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	Observed Temp. °C:
Correction Factor 0°C			Corrected Temp. °C:

REMARKS: *Verbal Result: Yes ☐ No ☒ Add'l Phone #:*  
*All Results are emailed. Please provide Email address:*  
*ngreene@ensdlum.com, tworiffsey@ensdlum.com*  
*Coolest temp 1.4°C*


Cardinal cannot accept verbal changes. Please email changes to [celey.keene@cardinallabsnm.com](mailto:celey.keene@cardinallabsnm.com)





## APPENDIX D

### Lithologic / Soil Sampling Logs


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								Sample Name: AH-1		Date: 7/6/2023	
								Site Name: Chiso 14 State Jet Pump			
								Incident Number: nAPP2205837214			
								Job Number: 03C2012059			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								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	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								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			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								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	1	SP	1-2' SAND with trace silt, dark to medium brown, poorly sorted, medium grained, no stain/odor, moist.			
M	2,178.4	1.1	N	AH-3A	2	2	TD	Total Depth @ 2' bgs; auger refusal			



								Sample Name: AH-4	Date: 7/6/2023
								Site Name: Chiso 14 State Jet Pump	
								Incident Number: nAPP2205837214	
								Job Number: 03C2012059	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								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			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								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.			
M	12,986.4	0.6	N	AH-5	3	3	SP-SC	2.5-3.5' SAND with clay, medium brown/red, fine grained, poorly sorted, no stain/odor, moist.			
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			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								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](mailto: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](mailto: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](mailto: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](mailto: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](mailto:Jocelyn.Harimon@emnrd.nm.gov)  
<http://www.emnrd.nm.gov>



---

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

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

All,

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

- Vacuum SWD H 35 Pipeline / nAPP2313058428
  - Sampling Date: 7/5/2023 @ 9:00 AM MST
- Chiso 14 State Jet Pump Excavation / nAPP2205837214
  - Sampling Date: 7/6/2023 @ 9:00 AM MST
- Mesa B #25 / nAPP2112744758
  - Sampling Date: 7/6-7/2023 @ 9:00 AM MST

- Mesa #16H Flowline / nAPP2123156473
  - Sampling Date: 7/7/2023 @ 9:00 AM MST

Thank you,



**Hadlie Green**

Project Geologist

432-557-8895

[hgreen@ensolum.com](mailto: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](mailto: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](mailto: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


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State of New Mexico  
Oil Conservation Division

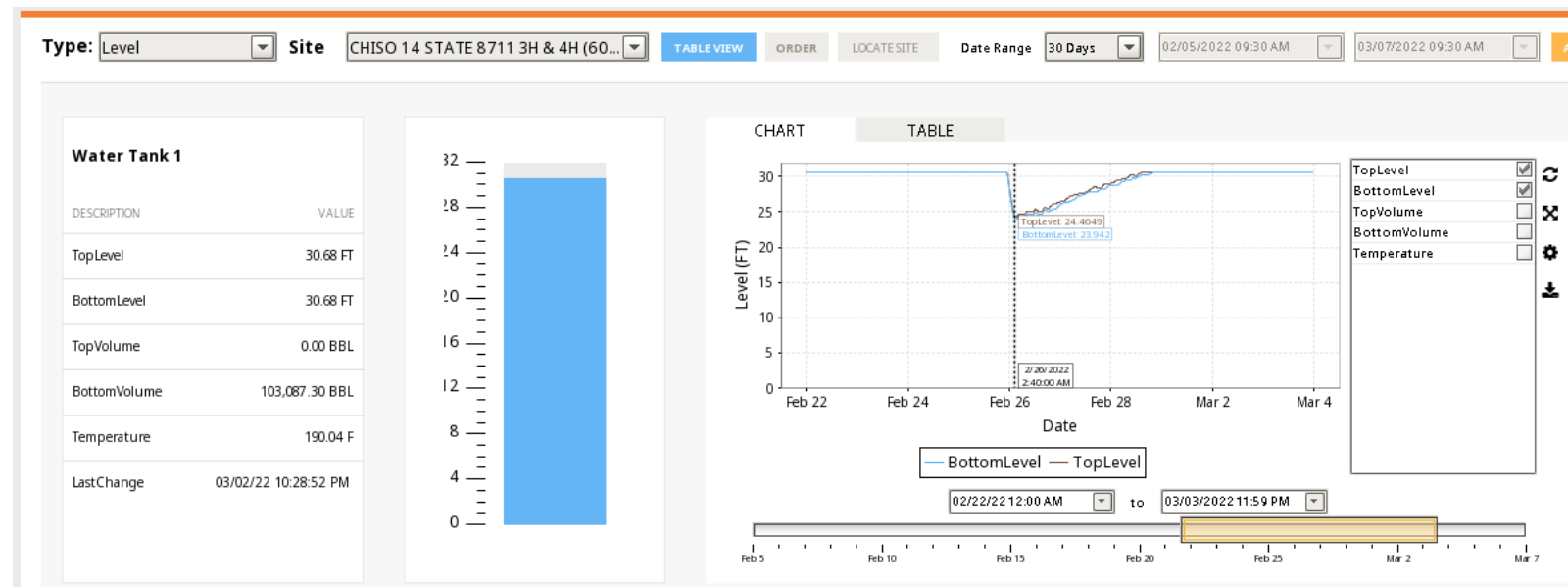
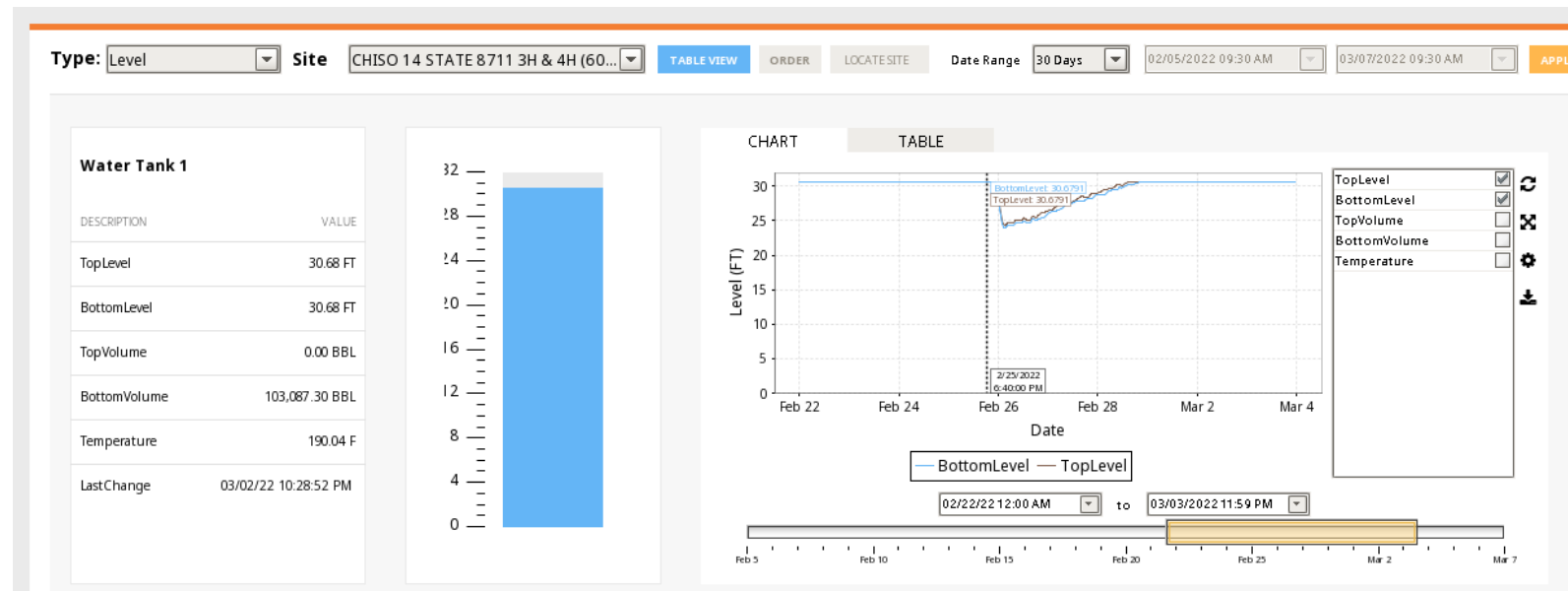
Incident ID	nAPP2205837214
District RP	
Facility ID	fAPP2129434580
Application ID	

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: <b>Bob Hall</b> Title: <b>Environmental Manager</b>  Signature: <u></u> Date: <b>3/8/2022</b>  email: <b>bhall@btaoil.com</b> Telephone: <b>432-682-3753</b>
<b><u>OCD Only</u></b>  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 <b>not</b> 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.

## Oil Conservation Division

Incident ID	nAPP2205837214
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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

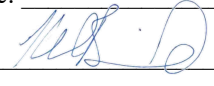
**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☒ 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