



October 14, 2024

**New Mexico Oil Conservation Division**

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

**Re: Closure Request  
MCA Unit 151 Flowline Release  
Incident Numbers nAPP2328619341 and nAPP2420871904  
Lea County, New Mexico**

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Maverick Permian, LLC (Maverick), has prepared this *Closure Request* as a follow-up to the *Remediation Work Plan (Work Plan)* submitted to the New Mexico Oil Conservation Division (NMOCD) on May 7, 2024, and approved by NMOCD on May 13, 2024. This *Closure Request* documents the delineation and excavation activities performed at the MCA Unit 151 Flowline Release (Site) to address impacts to soil resulting from two releases of crude oil and produced water at the Site. Based on the remediation activities completed as outlined in the approved *Work Plan*, Maverick is submitting this *Closure Request*, describing remediation that has occurred and requesting closure for Incident Numbers nAPP2328619341 and nAPP2420871904.

**SITE DESCRIPTION AND RELEASE SUMMARY**

The Site is located in Unit F, Section 28, Township 17 South, Range 32 East, in Lea County, New Mexico (32.8080° N, -103.7725° W) and is associated with oil and gas exploration and production operations on Federal Land managed by Bureau of Land Management (BLM).

On October 8, 2023, a flowline rupture resulted in the release of approximately 15 barrels (bbls) of produced water and 1 bbl of crude oil onto the surrounding pasture. No fluids were recovered. Maverick reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on October 26, 2023. The release was assigned Incident Number nAPP2328619341.

On July 26, 2024, a produced water flowline was struck during excavation activities for the above-described Incident Number nAPP2328619341. Approximately 50 bbls of produced water were released within the open excavation and 30 bbls were recovered with a vacuum truck. Maverick reported the release to the NMOCD on July 26, 2024. The release was assigned Incident Number nAPP2420871904.

**SITE CHARACTERIZATION AND CLOSURE CRITERIA**

The Site was characterized to assess 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).

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Results from the characterization were detailed in the approved *Work Plan* and are summarized below. Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be between 51 feet and 100 feet below ground surface (bgs) based on the nearest available groundwater well data. The closest permitted groundwater wells with depth to groundwater data are New Mexico Office of the State Engineer (NMOSE) wells RA 12020 POD 1 and RA 12721-POD 2 which are temporary monitoring wells installed to monitor groundwater impacts associated with a release north of the Site at the Maljamar Gas Plant. The monitoring wells are located approximately 950 feet to 1,050 feet north and south of the Site and have a reported depth to groundwater ranging from 75 feet to 81 feet. The monitoring wells were installed to investigate subsurface impacts and conduct long-term monitoring of affected groundwater. They are not utilized for beneficial use and will be plugged and abandoned upon completion of corrective action. The referenced well records are provided in Appendix A.

The closest continuously flowing or significant watercourse is greater than 300 feet from the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (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
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top 4 feet of the pasture area 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.

## SITE ASSESSMENT ACTIVITIES

On October 19, 2023, Tetra Tech personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Soil borings SB-1 and SB-3 through SB-11 were advanced via hand auger around the release extent to confirm the lateral extent of the surface release. The soil borings were advanced to a depth of 1-foot bgs. Discrete delineation soil samples were collected from soil borings at depths ranging from the ground surface to 1-foot bgs.

Soil borings SB-2 and SB-12 through SB-16 were advanced via hand auger within the release extent to assess the vertical extent of the release. The soil borings were advanced to a depth of 4 feet bgs. Discrete delineation soil samples were collected from soil borings at depths ranging from the ground surface to 4 feet bgs. The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation of the release is included in Appendix B.

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The delineation 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 constituents 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 Standard Method SM4500.

Laboratory analytical results for the delineation soil samples collected from soil borings SB-1 and SB-3 through SB-11, advanced around the release extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the lateral extent of the surface release.

Laboratory analytical results for the delineation soil samples collected from soil borings SB-2 and SB-12 through SB-16, advanced within the release extent, indicated TPH and chloride concentrations exceeded the Site Closure Criteria and/or reclamation requirements at depths ranging from the ground surface to 4 feet below ground surface. Laboratory analytical results are summarized on the attached Table 1.

Based on the soil sample analytical results, a *Work Plan* was submitted to the NMOCD proposing the following delineation and excavation activities:

- Vertical delineation of impacted soil to the most stringent Table I Closure Criteria at the location of soil borings SB-2 and SB-12 through SB-15.
- Excavation of impacted soil to the most stringent Table I Closure Criteria in the top 4 feet and to the Site Closure Criteria at depths greater than 4 feet bgs.
- Collection of sidewall samples at a frequency of every 200 square feet and floor samples at a frequency of every 400 square feet.
- The *Work Plan* was approved by NMOCD on May 13, 2024.

## DELINEATION ACTIVITIES

Between July and September 2024, Ensolum personnel were at the Site to complete additional delineation activities. As outlined in the approved *Work Plan*, soil borings/potholes were advanced at sample points SB-2 and SB-12 through SB-15 to delineate the vertical extent of impacted soil to below the most stringent Table I Closure Criteria. The soil borings were advanced to depths ranging from 8 feet to 16 feet bgs. Soil from the borings was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Final depth of the soil borings was determined by field screening results indicating compliance with the most stringent Table I Closure Criteria. Field screening results and observations from the soil borings were logged on lithologic soil sampling logs, which are included in Appendix C. Discrete delineation soil samples were collected from the soil borings at depths ranging from 5 feet to 16 feet bgs.

The soil samples were collected, handled, and analyzed as described above at Cardinal Laboratories in Hobbs, New Mexico. The delineation soil sample locations are presented on Figure 2. Photographic documentation was completed during the delineation activities. A photographic log is included in Appendix B.

Laboratory analytical results for the delineation samples from soil borings SB-2 and SB-12 through SB-15 advanced within the release extent, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria at depths ranging from 5 feet to 14 feet bgs.

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The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix D.

A produced water line was struck on July 26, 2024, during remediation activities for Incident Number nAPP2328619341. The released produced water was contained within the open excavation. The release was reported to the NMOCD and was assigned Incident Number nAPP2420871904. The release extent is depicted on Figure 2 and encompassed the area around delineation soil boring SB-13. The final vertical delineation samples were collected from SB-13 after the second release occurred. Additionally, soil borings SB-17 and SB-18 were advanced to the east and west of the release area to confirm that no release fluids escaped the open excavation. Laboratory analytical results for the delineation samples from soil borings SB-17 and SB-18 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria. Remediation of the July 26, 2024, release was completed in coordination with the on-going excavation activities for Incident Number nAPP2328619341.

## EXCAVATION ACTIVITIES

Between July and September 2024, Ensolum personnel were at the Site to oversee excavation of impacted soil based on the delineation soil sample analytical results and as outlined in the approved *Work Plan*. To direct excavation activities, soil was field screened for VOCs and chloride. Excavation activities were performed utilizing a hydro-vacuum, hand shovels, track-mounted backhoe and transport vehicles. The excavation was completed to depths ranging from 3 feet to 14 feet bgs.

Following removal of impacted soil, 5-point composite soil samples were collected every 400 square feet from the floor of the excavation and every 200 square feet from the sidewalls of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples FS01 through FS34 were collected from the floor of the excavation at depths ranging from 3 feet to 14 feet bgs. Composite soil samples SW01 through SW19 were collected from the sidewalls of the excavation at depths ranging from the ground surface to 13 feet bgs. The excavation soil samples were handled and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations were mapped utilizing a handheld GPS and are presented on Figure 3.

Laboratory analytical results for excavation floor samples FS01 through FS34 and excavation sidewall samples SW01 through SW19, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements, where applicable. Laboratory analytical results are summarized on Table 1 and the complete laboratory analytical reports are included as Appendix D.

The excavation measured approximately 13,200 square feet in areal extent. A total of approximately 4,800 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Disposal Facility located in Hobbs, New Mexico.

## RECLAMATION ACTIVITIES

Upon completion of excavation activities and receipt of final laboratory analytical results, the excavation was backfilled with locally procured soil. One representative 5-point composite sample (Backfill) was collected from the topsoil backfill material. The backfill soil sample was handled and analyzed following the same procedures as described above. Laboratory analytical results for the backfill soil sample confirmed compliance with the NMOCD requirement for the reclaimed area to contain non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg and TPH

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concentrations less than 100 mg/kg. The laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical report is included as Appendix D.

Following backfill activities, the disturbed pasture area was recontoured to match the surrounding topography and the surface was prepared for seeding. The disturbed pasture area was seeded with the BLM sandy sites seed mix #2 at the rate specified in pounds of pure live seed (PLS) per acre.

Species/Cultivar	PLS/Acre
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sand love grass ( <i>Eragrostis trichodes</i> )	1.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

The seed mix was distributed with a drill seeder. Photographs of the reclaimed excavation area are provided in Appendix B.

The Site will be monitored for vegetation growth to ensure that reclamation activities were successful. Focus for this phase will be to prevent erosion and site degradation, and to monitor for and treat invasive and noxious weed species.

- Erosion control of the newly reclaimed areas includes prompt revegetation and contouring of the surface to prevent concentrated surface water flow.
- Annual inspections will take place at the location to assess revegetation progress until vegetation is consistent with local natural vegetation density.
- If necessary, an additional application of the BLM seed mix will be applied.
- Noxious and invasive weeds will be identified and treated by licensed contracted herbicide applicator or mechanically removed.

A *Revegetation Report* will be submitted to the NMOCD once vegetation growth in the reclaimed pasture area has uniform vegetative cover that reflects a life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds, per NMAC 19.15.29.13 D.(3).

## CLOSURE REQUEST

As outlined in the approved *Work Plan*, delineation and excavation activities were conducted at the Site to address the releases of crude oil and produced water. Laboratory analytical results for the excavation soil samples, collected from the final excavation extent, indicated all COC concentrations were compliant with the Site Closure Criteria and reclamation requirements in the top 4 feet. Additionally, the release was vertically delineated to below the most stringent Table I Closure Criteria. Based on the laboratory analytical results, and excavation and delineation soil sampling activities completed as outlined in the approved *Work Plan*, no further remediation is required.

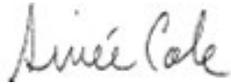
Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Depth to groundwater was estimated to be greater than 70 feet bgs at the Site and no sensitive receptors were identified near the release extent. Maverick believes the remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Numbers nAPP2328619341 and nAPP2420871904.

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If you have any questions or comments, please contact Ms. Aimee Cole at (720) 384-7365 or [acole@ensolum.com](mailto:acole@ensolum.com).

Sincerely,  
**Ensolum, LLC**



Aimee Cole  
Senior Managing Scientist

cc: Bryce Wagoner, Maverick Natural Resources  
Bureau of Land Management

Appendices:

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

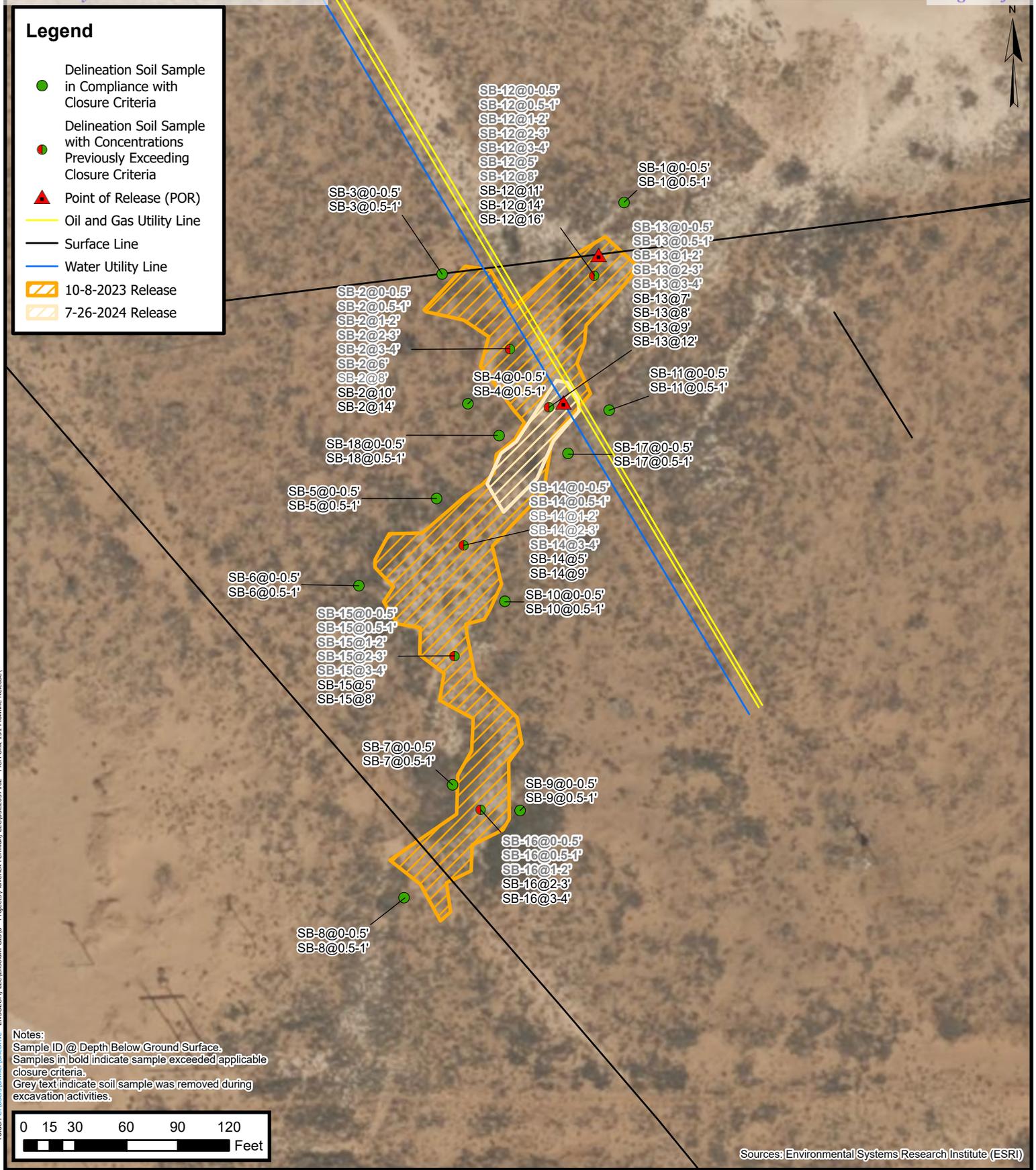


FIGURES



### Legend

- Delineation Soil Sample in Compliance with Closure Criteria
- Delineation Soil Sample with Concentrations Previously Exceeding Closure Criteria
- ▲ Point of Release (POR)
- Oil and Gas Utility Line
- Surface Line
- Water Utility Line
- 10-8-2023 Release
- 7-26-2024 Release



Notes:  
 Sample ID @ Depth Below Ground Surface.  
 Samples in bold indicate sample exceeded applicable closure criteria.  
 Grey text indicate soil sample was removed during excavation activities.

Sources: Environmental Systems Research Institute (ESRI)

## Delineation Soil Sample Locations

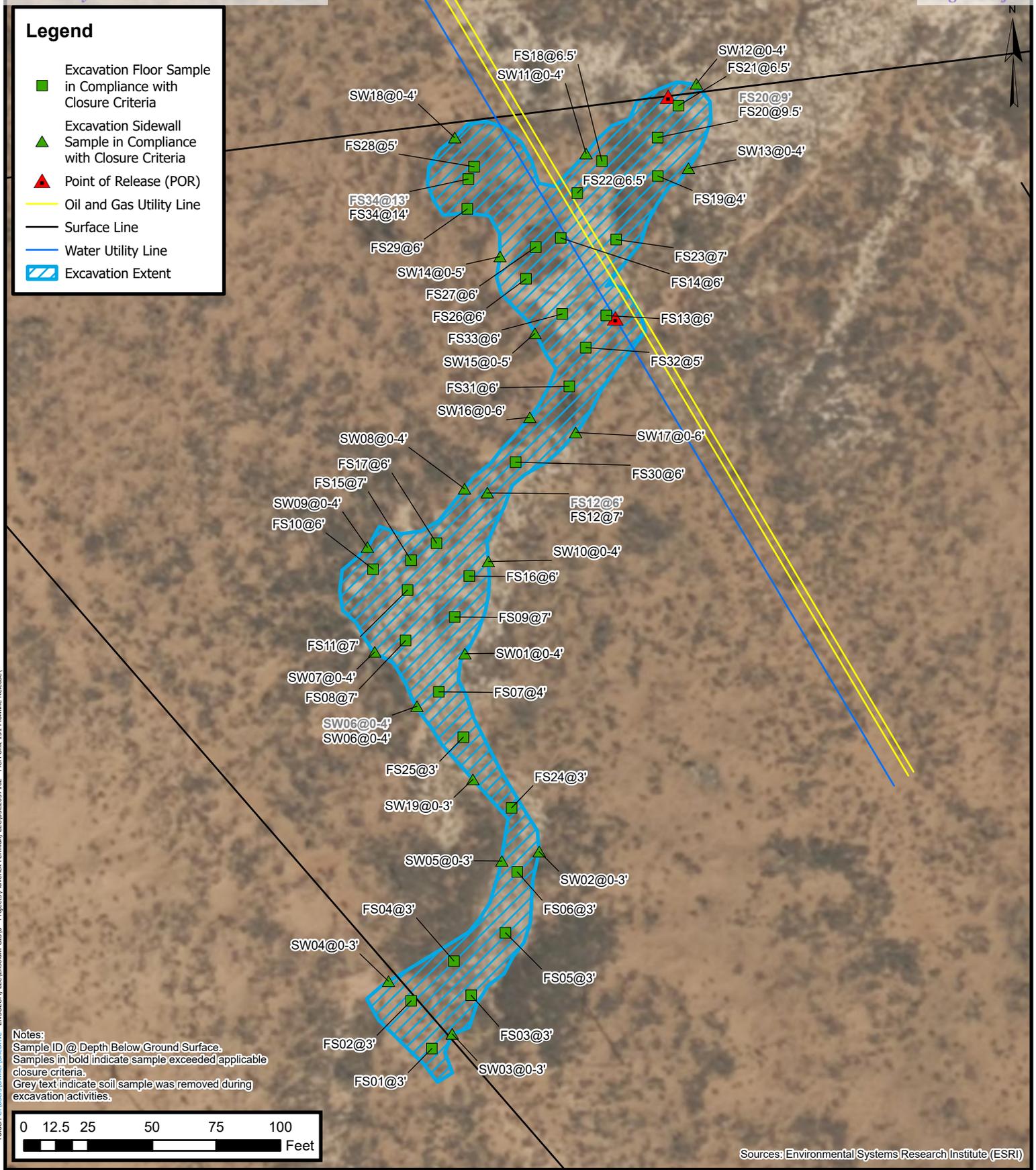
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 Unit F, Section 28, Township 17 South, Range 32 East  
 Lea County, New Mexico

# FIGURE 2



### Legend

- Excavation Floor Sample in Compliance with Closure Criteria
- ▲ Excavation Sidewall Sample in Compliance with Closure Criteria
- ▲ Point of Release (POR)
- Oil and Gas Utility Line
- Surface Line
- Water Utility Line
- Excavation Extent



## Excavation Soil Sample Locations

Maverick Permian, LLC

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Unit F, Section 28, Township 17 South, Range 32 East

Lea County, New Mexico

### FIGURE

### 3





TABLES



<b>TABLE 1</b> <b>SOIL SAMPLE ANALYTICAL RESULTS</b> MCA Unit 151 Flowline Release Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>10,000</b>
<b>NMOCD Reclamation Requirements for the top four feet</b>			<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
<b>Delienation Soil Samples</b>										
SB-1	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-1	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-2	10/19/2023	0-0.5	<0.050	<0.300	<50.0	22,100	9,450	<b>22,100</b>	<b>31,550</b>	48.0
SB-2	10/19/2023	0.5-1	<0.050	0.75	<50.0	14,700	7,230	<b>14,700</b>	<b>21,930</b>	48.0
SB-2	10/19/2023	1-2	<0.050	<0.300	<50.0	10,900	5,830	<b>10,900</b>	<b>16,730</b>	32.0
SB-2	10/19/2023	2-3	<0.050	<0.300	<50.0	9,660	4,780	<b>9,660</b>	<b>14,440</b>	<16.0
SB-2	10/19/2023	3-4	<0.050	<0.300	<50.0	5,550	3,200	<b>5,550</b>	<b>8,750</b>	16.0
SB-2	7/15/2024	6	<0.100	16.6	1,150	15,300	2,790	<b>16,450</b>	<b>19,240</b>	<16.0
SB-2	7/15/2024	8	<0.050	<0.300	19.7	844	145	864	1,009	3,120
SB-2	9/13/2024	10	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
SB-2	9/13/2024	14	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SB-3	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-3	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-4	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-4	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-5	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-5	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-6	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-6	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-7	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-7	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0



<b>TABLE 1</b> <b>SOIL SAMPLE ANALYTICAL RESULTS</b> MCA Unit 151 Flowline Release Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>10,000</b>
<b>NMOCD Reclamation Requirements for the top four feet</b>			<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
SB-8	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-8	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SB-9	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-9	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-10	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-10	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SB-11	10/19/2023	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SB-11	10/19/2023	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-12	10/19/2023	0-0.5	<b>23.7</b>	<b>587</b>	8,180	25,800	5,430	<b>33,980</b>	<b>39,410</b>	<b>3,200</b>
SB-12	10/19/2023	0.5-1	<b>13.9</b>	<b>541</b>	6,940	14,300	2,830	<b>21,240</b>	<b>24,070</b>	<b>1,710</b>
SB-12	10/19/2023	1-2	6.50	<b>313</b>	3,610	8,490	1,550	<b>12,100</b>	<b>13,650</b>	<b>2,200</b>
SB-12	10/19/2023	2-3	1.88	<b>147</b>	1,390	3,690	555	<b>5,080</b>	<b>5,635</b>	<b>5,360</b>
SB-12	10/19/2023	3-4	1.53	<b>81.9</b>	2,260	6,770	1,070	<b>9,030</b>	<b>10,100</b>	<b>4,880</b>
SB-12	7/15/2024	5	<0.050	<b>3.92</b>	366	4,560	656	<b>4,926</b>	<b>5,582</b>	3,000
SB-12	7/15/2024	8	<0.050	<b>2.80</b>	393	9,840	1,870	<b>10,233</b>	<b>12,103</b>	32.0
SB-12	9/13/2024	11	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	608
SB-12	9/13/2024	14	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	464
SB-12	9/13/2024	16	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384



<b>TABLE 1</b> <b>SOIL SAMPLE ANALYTICAL RESULTS</b> MCA Unit 151 Flowline Release Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>10,000</b>
<b>NMOCD Reclamation Requirements for the top four feet</b>			<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
SB-13	10/19/2023	0-0.5	<0.050	<b>132</b>	2,560	15,300	2,970	<b>17,860</b>	<b>20,830</b>	96.0
SB-13	10/19/2023	0.5-1	<0.050	7.48	229	2,300	469	<b>2,529</b>	<b>2,998</b>	128
SB-13	10/19/2023	1-2	<0.050	0.84	27	706	155	<b>733</b>	<b>888</b>	256
SB-13	10/19/2023	2-3	<0.050	0.36	<10.0	421	90	<b>421</b>	<b>511</b>	<b>1,800</b>
SB-13	10/19/2023	3-4	<0.050	<0.300	<10.0	501	107	<b>501</b>	<b>608</b>	<b>1,710</b>
SB-13	7/12/2024	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,100
SB-13	7/12/2024	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	880
SB-13	9/13/2024	9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,150
SB-13	9/13/2024	12	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SB-14	10/19/2023	0-0.5	0.12	44.0	1,200	12,400	2,410	<b>13,600</b>	<b>16,010</b>	<b>2,400</b>
SB-14	10/19/2023	0.5-1	<0.050	<0.300	<10.0	145	24	<b>145</b>	<b>169</b>	<b>1,960</b>
SB-14	10/19/2023	1-2	<0.050	<0.300	<10.0	34.8	<10.0	34.8	34.8	496
SB-14	10/19/2023	2-3	<0.050	<0.300	<10.0	80.3	<10.0	80.3	80.3	576
SB-14	10/19/2023	3-4	<0.050	<0.300	<10.0	496	103	<b>496</b>	<b>599</b>	<b>650</b>
SB-14	7/12/2024	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	608
SB-14	7/12/2024	9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
SB-15	10/19/2023	0-0.5	<2.00	<b>107</b>	2,820	31,500	6,080	<b>34,320</b>	<b>40,400</b>	<b>2,160</b>
SB-15	10/19/2023	0.5-1	2.93	<b>98.1</b>	2,600	30,500	5,830	<b>33,100</b>	<b>38,930</b>	<b>2,160</b>
SB-15	10/19/2023	1-2	<5.00	26.4	1,300	12,600	1,980	<b>13,900</b>	<b>15,880</b>	<b>1,640</b>
SB-15	10/19/2023	2-3	<0.20	26.6	366	3,020	587	<b>3,386</b>	<b>3,973</b>	288
SB-15	10/19/2023	3-4	<0.050	2.3	68.8	832	<10.0	<b>901</b>	<b>901</b>	<b>656</b>
SB-15	7/12/2024	5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
SB-15	7/12/2024	8	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224



<b>TABLE 1</b> <b>SOIL SAMPLE ANALYTICAL RESULTS</b> MCA Unit 151 Flowline Release Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>10,000</b>
<b>NMOCD Reclamation Requirements for the top four feet</b>			<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
SB-16	10/19/2023	0-0.5	<0.050	<0.300	<10.0	1,810	329	<b>1,810</b>	<b>2,139</b>	32.0
SB-16	10/19/2023	0.5-1	<0.050	<0.300	<10.0	211	59.9	<b>211</b>	<b>271</b>	32.0
SB-16	10/19/2023	1-2	<0.050	<0.300	<10.0	165	31.8	<b>165</b>	<b>197</b>	32.0
SB-16	10/19/2023	2-3	<0.050	<0.300	<10.0	21.7	<10.0	21.7	21.7	32.0
SB-16	10/19/2023	3-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SB-17	9/27/2024	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SB-17	9/27/2024	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SB-18	9/27/2024	0-0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SB-18	9/27/2024	0.5-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
Excavation Floor Soil Samples										
FS01*	8/1/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS02*	8/1/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS03*	8/1/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS04*	8/1/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS05*	7/9/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS06*	7/9/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
FS07	8/1/2024	4	<0.050	<0.300	<10.0	876	215	876	1,091	416
FS08	8/26/2024	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
FS09	8/26/2024	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS10	8/26/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FS11	8/26/2024	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	624
FS12	9/5/2024	6	<0.050	4.56	121	1,390	242.0	<b>1,511</b>	1,753	528
FS12	9/12/2024	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	960



<b>TABLE 1</b> <b>SOIL SAMPLE ANALYTICAL RESULTS</b> MCA Unit 151 Flowline Release Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>10,000</b>
<b>NMOCD Reclamation Requirements for the top four feet</b>			<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
FS13	8/9/2024	6	<0.050	<0.300	<10.0	148	21.5	148	170	1,780
FS14	8/14/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	272
FS15	8/26/2024	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FS16	8/26/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS17	8/26/2024	6	<0.050	<0.300	<10.0	127	11.9	127	139	304
FS18	9/9/2024	6.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,040
FS19	8/28/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,840
FS20	9/9/2024	9	1.29	<b>93</b>	795	2,690	396.0	<b>3,485</b>	<b>3,881</b>	4,080
FS20	9/12/2024	9.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,300
FS21	9/9/2024	6.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,600
FS22	8/28/2024	6.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	9,000
FS23	8/28/2024	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,170
FS24*	8/29/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS25*	8/29/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS26	9/5/2024	6	<0.050	<0.300	<10.0	97.0	31.0	97.0	128	208
FS27	9/5/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
FS28	9/5/2024	5	<0.050	<0.300	<10.0	568	176.0	568	744	144
FS29	9/5/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FS30	9/5/2024	6	<0.050	0.994	34.7	522	75.2	557	632	864
FS31	9/5/2024	6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,600
FS32	9/5/2024	5	<0.050	<0.300	<10.0	178	40.7	178	219	272



<b>TABLE 1</b> <b>SOIL SAMPLE ANALYTICAL RESULTS</b> MCA Unit 151 Flowline Release Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>10,000</b>
<b>NMOCD Reclamation Requirements for the top four feet</b>			<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
FS33	9/5/2024	6	<0.050	<0.300	<10.0	21.7	<10.0	21.7	21.7	240
FS34	9/12/2024	13	<0.050	0.6	29.7	1,610	402	<b>1,640</b>	2,042	32.0
FS34	9/16/2024	14	<0.050	<0.300	<10.0	212	45.2	212	257	32.0
<b>Excavation Sidewall Soil Samples</b>										
SW01*	8/26/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW01	8/26/2024	4-7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SW02*	8/1/2024	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW03*	8/1/2024	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW04*	8/1/2024	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW05*	8/1/2024	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW06*	8/26/2024	0-4	<0.050	<0.300	<10.0	108	32.7	108	<b>141</b>	48.0
SW06*	9/5/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW07*	8/26/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW07	8/26/2024	4-7	0.06	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SW08*	8/1/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SW09*	8/26/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW09	8/26/2024	4-7	<0.050	<0.300	<10.0	20.4	<10.0	20.4	20.4	64.0
SW10*	8/26/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW10	8/26/2024	4-6	<0.050	<0.300	<10.0	581	152	581	733	112
SW11*	8/28/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW11	9/9/2024	4-9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144



<b>TABLE 1</b> <b>SOIL SAMPLE ANALYTICAL RESULTS</b> MCA Unit 151 Flowline Release Maverick Permian, LLC Lea County, New Mexico										
Sample Designation	Date	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)
<b>NMOCD Table I Closure Criteria (NMAC 19.15.29)</b>			<b>10</b>	<b>50</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>1,000</b>	<b>2,500</b>	<b>10,000</b>
<b>NMOCD Reclamation Requirements for the top four feet</b>			<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>100</b>	<b>600</b>
SW12*	8/28/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW12	9/9/2024	4-6.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,470
SW13*	8/28/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
SW14*	8/28/2024	0-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW15*	8/28/2024	0-5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SW16*	9/5/2024	0-6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW17*	8/28/2024	0-6	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SW18*	9/12/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SW18	9/12/2024	4-8	<0.050	<0.300	<10.0	14.4	<10.0	14.4	14.4	48.0
SW18	9/12/2024	8-13	<0.050	<0.300	<10.0	212	119	212	331	32.0
SW19*	8/29/2024	0-3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0

**Notes:**

bgs: below ground surface

mg/kg: milligrams per kilogram

NMAC: New Mexico Administrative Code

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

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

**Grey** text represents samples that have been excavated



## APPENDIX A

### Referenced Well Records

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# New Mexico Office of the State Engineer

## Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

<b>Well Tag</b>	<b>POD Number</b>	<b>Q64 Q16 Q4</b>	<b>Sec</b>	<b>Tws</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
NA	RA 12721 POD2	1 1 4	28	17S	32E	615055	3630407

<b>Driller License:</b> 1456	<b>Driller Company:</b> WHITE DRILLING COMPANY		
<b>Driller Name:</b> JOHN W WHITE			
<b>Drill Start Date:</b> 04/18/2019	<b>Drill Finish Date:</b> 04/19/2019	<b>Plug Date:</b>	
<b>Log File Date:</b> 05/15/2019	<b>PCW Rcv Date:</b>	<b>Source:</b> Shallow	
<b>Pump Type:</b>	<b>Pipe Discharge Size:</b>	<b>Estimated Yield:</b> 0 GPM	
<b>Casing Size:</b> 2.00	<b>Depth Well:</b> 124 feet	<b>Depth Water:</b> 75 feet	

Water Bearing Stratifications:	Top	Bottom	Description
	56	99	Sandstone/Gravel/Conglomerate
	99	102	Sandstone/Gravel/Conglomerate
	102	103	Shale/Mudstone/Siltstone
	103	105	Shale/Mudstone/Siltstone
	105	117	Shale/Mudstone/Siltstone
	117	118	Other/Unknown
	118	120	Shale/Mudstone/Siltstone
	120	121	Sandstone/Gravel/Conglomerate
	121	124	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	84	124

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



# New Mexico Office of the State Engineer

## Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)						
<b>Well Tag</b>	<b>POD Number</b>	(quarters are smallest to largest)	(NAD83 UTM in meters)					
		<b>Q64 Q16 Q4 Sec Tws Rng</b>	<b>X Y</b>					
RA 12020	POD1	2 2 1 28 17S 32E	614828 3630954					

<b>Driller License:</b> 1456	<b>Driller Company:</b> WHITE DRILLING COMPANY	
<b>Driller Name:</b> WHITE, JOHN (LD)		
<b>Drill Start Date:</b> 09/24/2013	<b>Drill Finish Date:</b> 09/25/2013	<b>Plug Date:</b>
<b>Log File Date:</b> 10/07/2013	<b>PCW Rcv Date:</b>	<b>Source:</b> Shallow
<b>Pump Type:</b>	<b>Pipe Discharge Size:</b>	<b>Estimated Yield:</b>
<b>Casing Size:</b> 2.00	<b>Depth Well:</b> 120 feet	<b>Depth Water:</b> 81 feet

Water Bearing Stratifications:	Top	Bottom	Description
	70	111	Sandstone/Gravel/Conglomerate
	111	120	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	75	110

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

4/23/24 1:39 PM

POINT OF DIVERSION SUMMARY



## APPENDIX B

### Photographic Log

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**Photographic Log**  
Maverick Permian, LLC  
MCA Unit 151 Flowline Release  
Incident Number nAPP2328619341 and  
nAPP2420871904



Photograph 1 Date: 10/10/2023  
Description: Release area (nAPP2328619341)  
View: South



Photograph 2 Date: 07/26/2024  
Description: Release area (nAPP2420871904)  
View: East



Photograph 3 Date: 07/15/2024  
Description: Excavation activities  
View: South



Photograph 4 Date: 08/19/2024  
Description: Excavation activities  
View: Southwest



**Photographic Log**  
Maverick Permian, LLC  
MCA Unit 151 Flowline Release  
Incident Number nAPP2328619341 and  
nAPP2420871904



Photograph 5 Date: 08/29/2024  
Description: Excavation activities  
View: West



Photograph 6 Date: 08/29/2024  
Description: Excavation activities  
View: North



Photograph 7 Date: 09/27/2024  
Description: Backfilled excavation  
View: Southwest



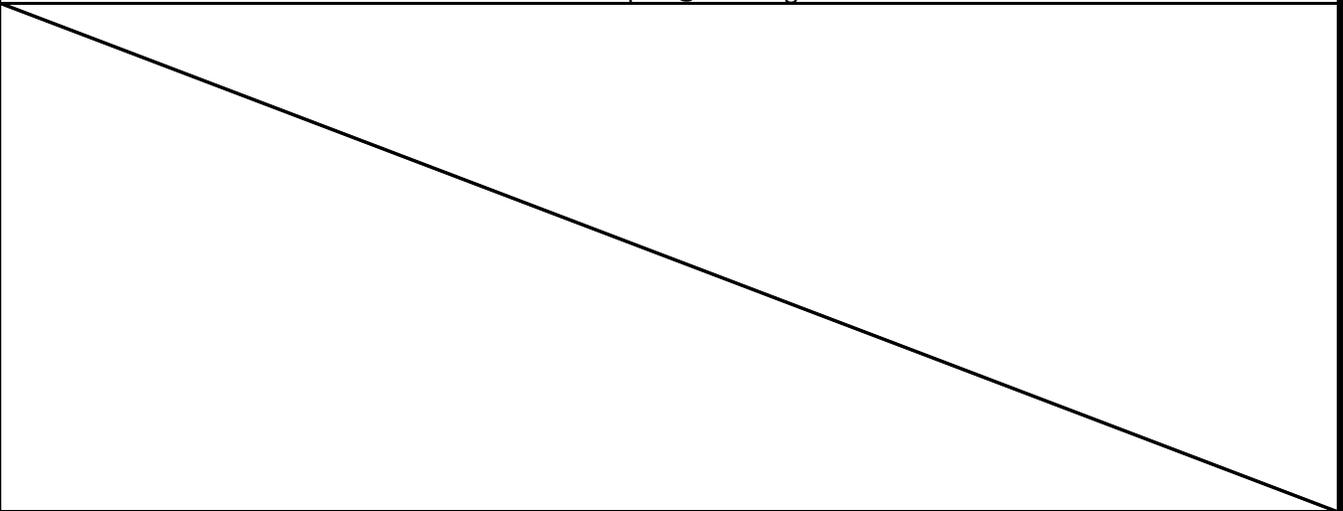
Photograph 8 Date: 09/27/2024  
Description: Backfilled excavation  
View: North

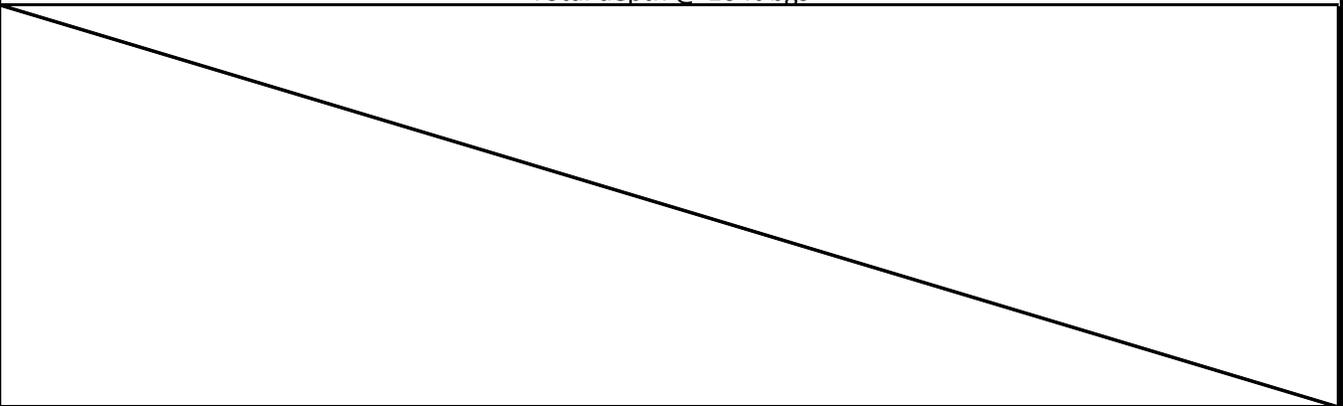


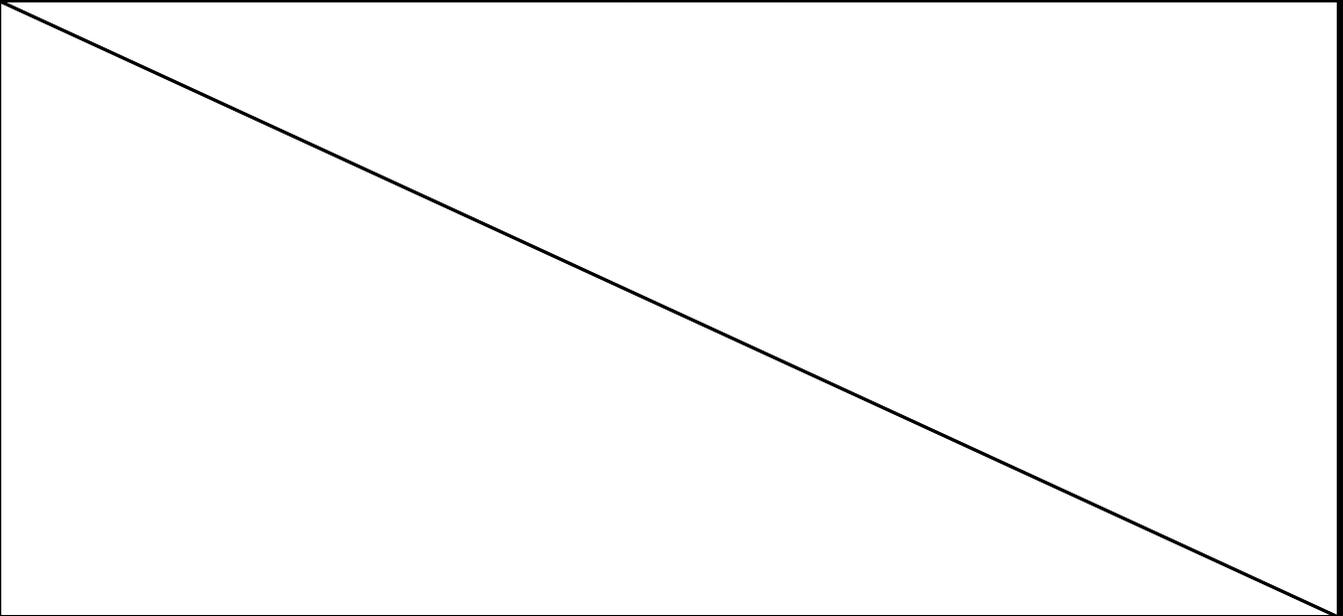
## APPENDIX C

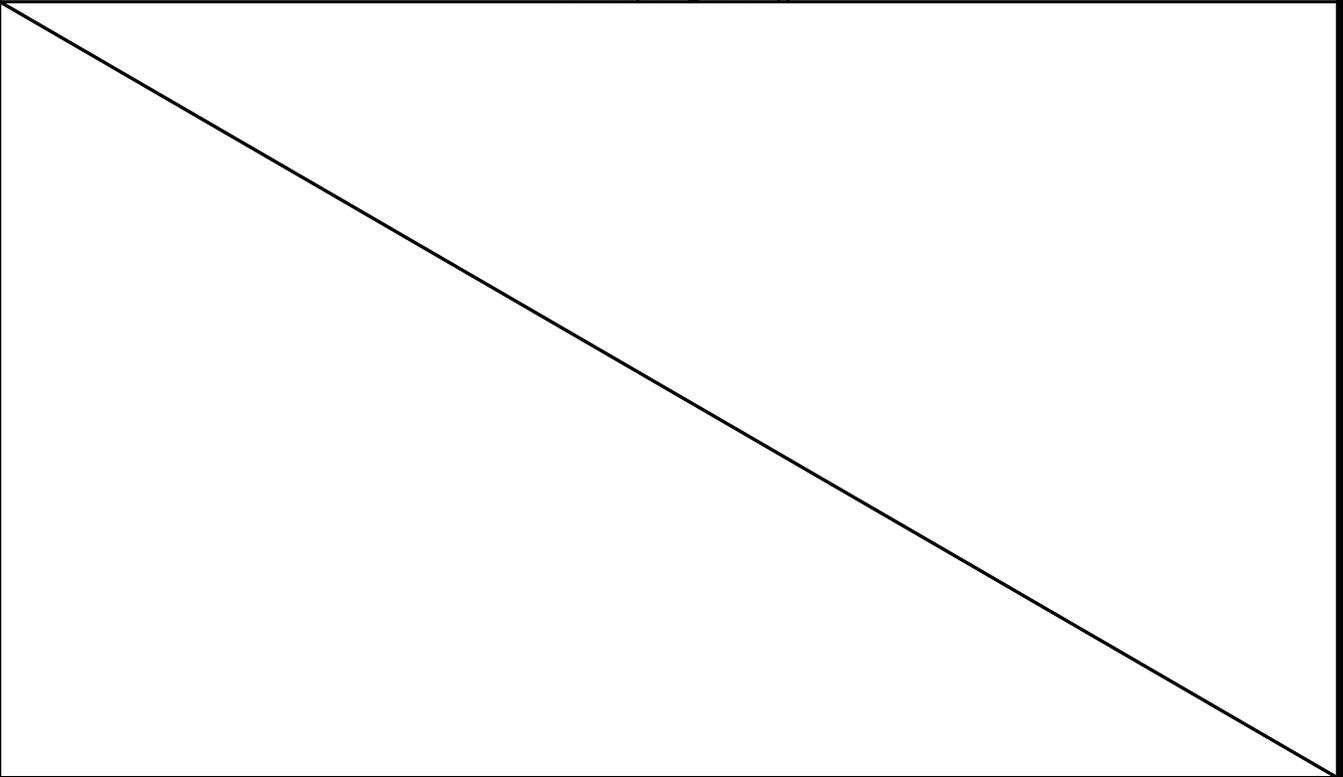
### Lithologic Soil Sampling Logs

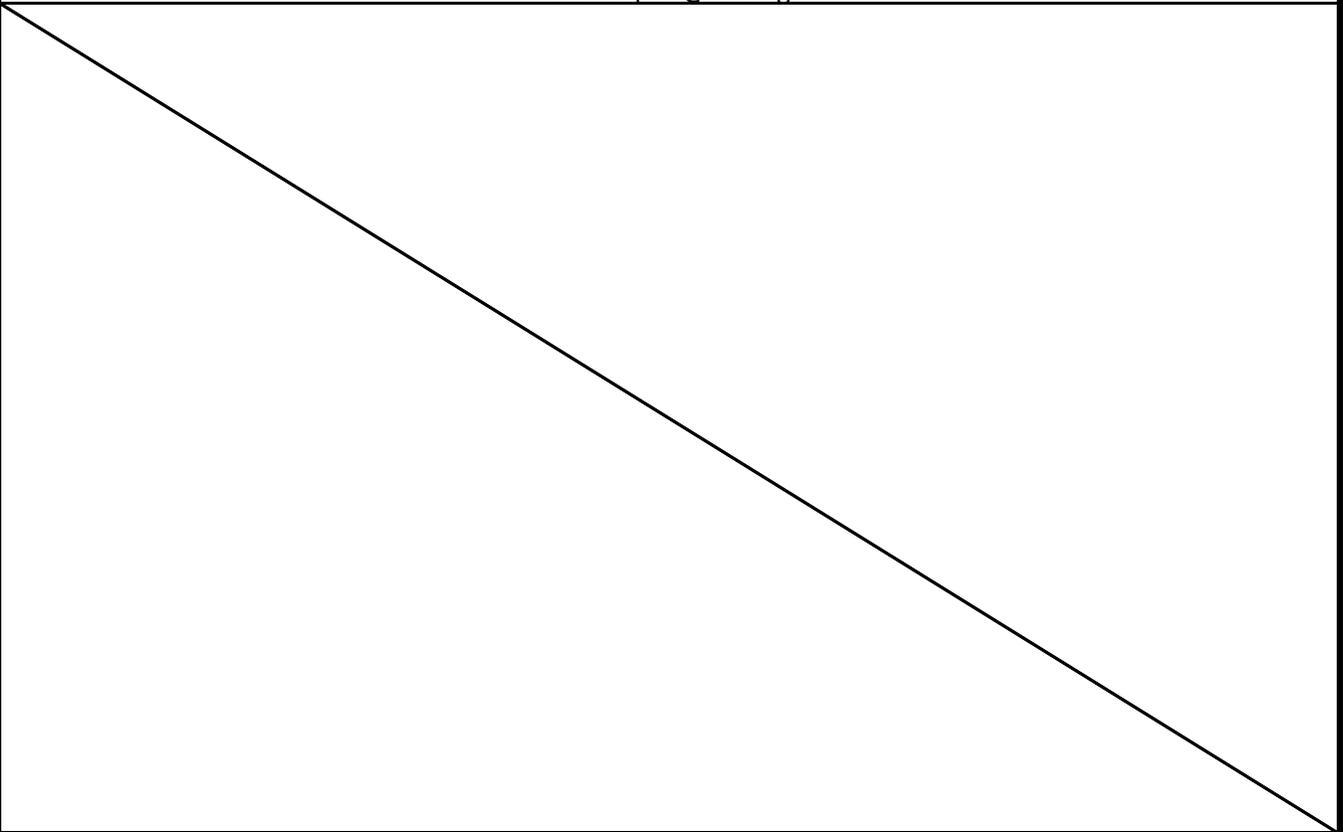
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								Sample Name: SB-2		Date: July-September 2024	
								Site Name: MCA Unit 151 Flowline Release			
								Incident Number: nAPP2328619341			
								Job Number: 03E2057102			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>								Logged By: Mario Sarkis		Method: Hand Auger	
Coordinates: 32.808327, -103.772412								Hole Diameter: 3"		Total Depth: 14 ft bgs	
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. No correction factors included.											
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions			
						0					
						1					
						2	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform			
						3					
						4					
D		224.5	Y			5	SW	Silty Sand - Red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Thickly bedded, Non-Uniform, trace calcium present, lightly consolidated			
D	<173	1,035	Y	SB-2	6	6					
D		425.70	N			7					
D	<173	357.6	N	SB-2	8	8	CCHE	Caliche - Light to dark tan, medium dense, coarse to medium grain size, non plastic, dry, noncohesive			
						9					
D	442	1.7	N	SB-2	10	10					
						11					
D	442	0.4	N			12	CL	Lean Clay w/ Sand - Pink with white mottling, low plasticity, moist, non cohesive			
						13					
D	263	0.3	N	SB-2	14	14					
Total depth @ 14 ft bgs											
											

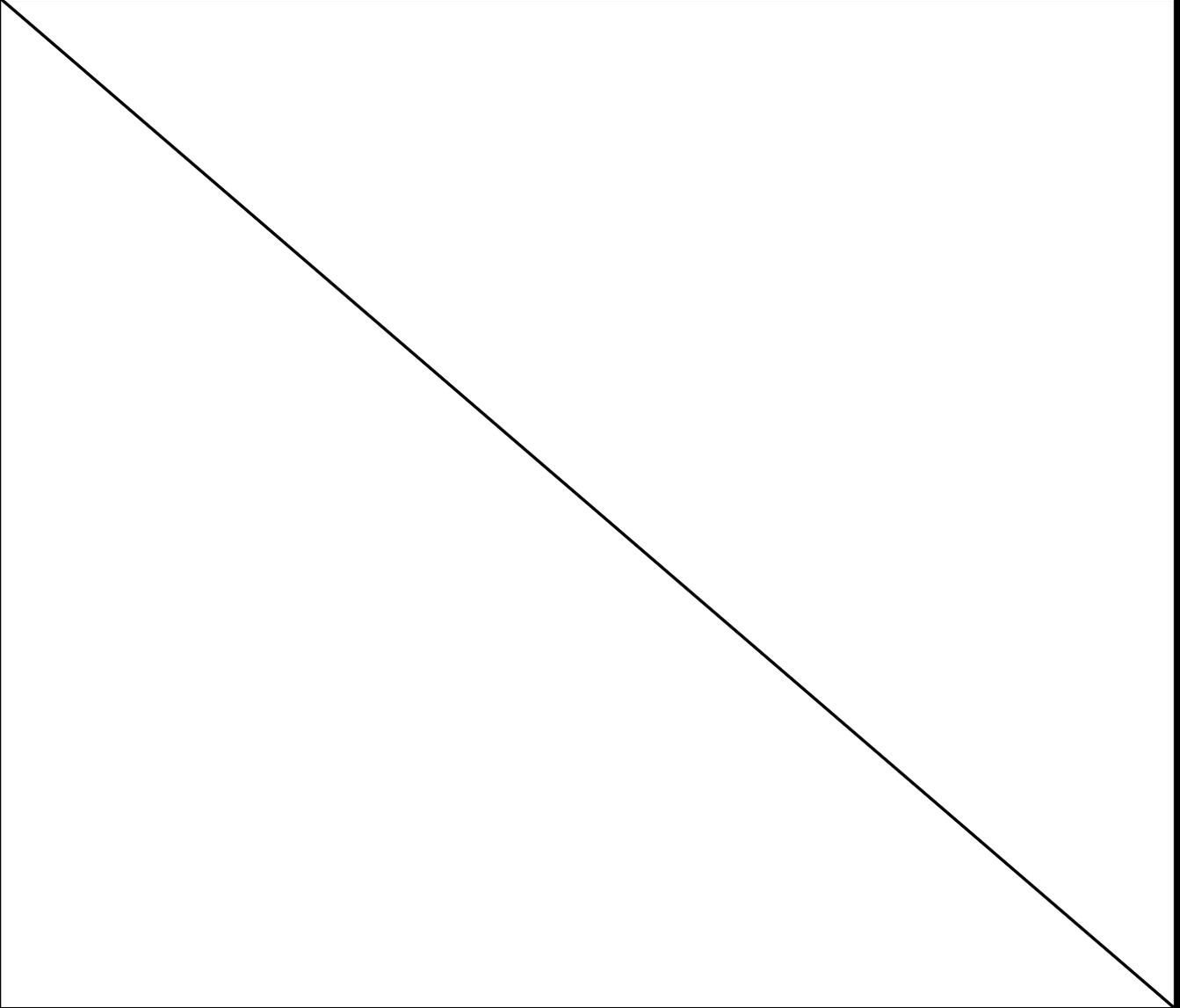
							Sample Name: SB-12		Date: July-September 2024	
							Site Name: MCA Unit 151 Flowline Release			
							Incident Number: nAPP2328619341			
							Job Number: 03E2057102			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>							Logged By: Mario Sarkis		Method: Hand Auger	
Coordinates: 32.808444, -103.772250							Hole Diameter: 3"		Total Depth: 16 ft bgs	
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. No correction factors included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
						0				
						1				
						2	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform		
					3					
					4					
M	4,832	2560	Y	SB-12	5					
						5	SW	Silty Sand - Red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Thickly bedded, Non-Uniform, trace calcium present, lightly consolidated		
M		658	Y			6				
M		459	Y			7				
M	4,452	396	N	SB-12	8	8	CCHE	Caliche - Light to dark tan, medium dense, coarse to medium grain size, non plastic, dry, noncohesive		
						9				
M	929	1.4	N			10				
M	929	0.8	N	SB-12	11	11				
M	851	2.2	N			12	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform, small gravel present		
						13				
M	610	0.8	N	SB-12	14	14				
M	1,254	0.7	N			15				
M	492	0.2	N	SB-12	16	16				
Total depth @ 16 ft bgs										
										

							Sample Name: SB-13		Date: July-September 2024	
							Site Name: MCA Unit 151 Flowline Release			
							Incident Number: nAPP2328619341			
							Job Number: 03E2057102			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>							Logged By: Mario Sarkis		Method: Hand Auger	
Coordinates: 32.808233, -103.772339							Hole Diameter: 3"		Total Depth: 12 ft bgs	
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. No correction factors included.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions		
						0				
						1				
						2	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform		
						3				
						4				
M	274	0.5	N			5	SW	Silty Sand - Red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Thickly bedded, Non-Uniform, trace calcium present, lightly consolidated		
M	918	0.3	N			6				
M	1,584	0	N	SB-13	7	7				
M	403	0	N	SB-13	8	8				
M	1,355	0.7	N	SB-13	9	9	SC	Clayey Sand - Loose, Pink with white mottling, low plasticity, moist, non cohesive		
M	1,069	0.3	N			10				
						11				
M	442	0.6	N	SB-13	12	12				
Total depth at 12 ft bgs										
										

					Sample Name: SB-14		Date: July 2024	
					Site Name: MCA Unit 151 Flowline Release			
					Incident Number: nAPP2328619341			
					Job Number: 03E2057102			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>					Logged By: Mario Sarkis		Method: Hand Auger	
Coordinates: 32.808012, -103.772505					Hole Diameter: 3"		Total Depth: 9 ft bgs	
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. No correction factors included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0 1 2 3 4	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform
M	840	6.2	N	SB-14	5	5	SC	Clayey Sand - Red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Thickly bedded, Non-Uniform, trace calcium present, lightly consolidated
M	274	3.2	N			6		
M	235	2.7	N			7		
M	453	5.9	N			8		
M	403	4.7	N	SB-14	9	9		
Total depth @ 9 ft bgs								
								

					Sample Name: SB-15		Date: July 2024					
					Site Name: MCA Unit 151 Flowline Release				Incident Number: nAPP2328619341			
					Job Number: 03E2057102				Logged By: Mario Sarkis		Method: Hand Auger	
					Coordinates: 32.807835, -103.772524				Hole Diameter: 3"		Total Depth: 8 ft bgs	
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>												
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. No correction factors included.												
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions				
						0						
						1						
						2	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform				
						3						
						4						
M	235	3.6	N	SB-15	5	5						
M	201	0.8	N			6	SC	Clayey Sand - Red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Thickly bedded, Non-Uniform, trace calcium present, lightly consolidated				
M	168	1.2	N			7						
M	274	0.7	N	SB-15	8	8						
Total depth @ 8 ft bgs												
												

					Sample Name: SB-17		Date: 9/27/2024	
					Site Name: MCA Unit 151 Flowline Release			
					Incident Number: nAPP2328619341			
					Job Number: 03E2057102			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>					Logged By: Mario Sarkis		Method: Hand Auger	
Coordinates: 32.808159, -103.772306					Hole Diameter: 3"		Total Depth: 1 ft bgs	
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. No correction factors included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<168	2.5	N	SB-17	0.0-05	0	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform
D	<168	2.7	N	SB-17	0.5-1.0	1		
Total depth @ 1 ft bgs								
<div style="border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black; width: 100%; height: 100%; position: relative;"> <div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black;"></div> </div>								

					Sample Name: SB-18		Date: 9/27/2024	
					Site Name: MCA Unit 151 Flowline Release			
					Incident Number: nAPP2328619341			
					Job Number: 03E2057102			
<b>LITHOLOGIC / SOIL SAMPLING LOG</b>					Logged By: Mario Sarkis		Method: Hand Auger	
Coordinates: 32.808190, -103.772436					Hole Diameter: 3"		Total Depth: 1 ft bgs	
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. No correction factors included.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	<168	3.5	N	SB-18	0.0-0.5	0	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform
D	<168	2.4	N	SB-18	0.5-1.0	1		
Total depth @ 1 ft bgs								
								



## APPENDIX D

### Laboratory Analytical Reports & Chain of Custody Documentation

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

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October 25, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 151

Enclosed are the results of analyses for samples received by the laboratory on 10/19/23 16:19.

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.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 1 (0-.5') (H235740-01)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2023	ND	2.11	105	2.00	7.95	
Toluene*	<0.050	0.050	10/24/2023	ND	2.14	107	2.00	5.23	
Ethylbenzene*	<0.050	0.050	10/24/2023	ND	2.25	113	2.00	5.41	
Total Xylenes*	<0.150	0.150	10/24/2023	ND	6.74	112	6.00	5.64	
Total BTEX	<0.300	0.300	10/24/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	10/23/2023	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	10/20/2023	ND	186	92.8	200	0.215	
DRO >C10-C28*	<10.0	10.0	10/20/2023	ND	203	102	200	1.04	
EXT DRO >C28-C36	<10.0	10.0	10/20/2023	ND					

Surrogate: 1-Chlorooctane 102 % 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



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

**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 1 (.5-1') (H235740-02)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 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	10/23/2023	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	10/20/2023	ND	186	92.8	200	0.215	
DRO >C10-C28*	<10.0	10.0	10/20/2023	ND	203	102	200	1.04	
EXT DRO >C28-C36	<10.0	10.0	10/20/2023	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 3 (0-.5') (H235740-03)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 126 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 89.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 3 (.5-1') (H235740-04)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 127 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 126 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 4 (0-.5') (H235740-05)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 115 % 48.2-134

Surrogate: 1-Chlorooctadecane 129 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 4 (.5-1') (H235740-06)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 97.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 5 (0-.5') (H235740-07)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 85.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 5 (.5-1') (H235740-08)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 89.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 6 (0-.5') (H235740-09)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 6 (.5-1') (H235740-10)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	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	<16.0	16.0	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 7 (0-.5') (H235740-11)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 122 % 48.2-134

Surrogate: 1-Chlorooctadecane 138 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 7 (.5-1') (H235740-12)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 128 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 8 (0-.5') (H235740-13)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 86.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.9 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 8 (.5-1') (H235740-14)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	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	32.0	16.0	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 97.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 9 (0-.5') (H235740-15)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 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	10/23/2023	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	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 123 % 48.2-134

Surrogate: 1-Chlorooctadecane 140 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 9 (.5-1') (H235740-16)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 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	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 109 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 10 (0-5') (H235740-17)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 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	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 93.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 10 (.5-1') (H235740-18)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	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	32.0	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 128 % 48.2-134

Surrogate: 1-Chlorooctadecane 141 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 11 (0-.5') (H235740-19)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 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	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 99.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 11 (.5-1') (H235740-20)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2023	ND	180	90.2	200	2.17	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 89.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 2 (0-.5') (H235740-21)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.08	104	2.00	2.05	
Toluene*	<0.050	0.050	10/23/2023	ND	2.04	102	2.00	5.61	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	1.98	99.1	2.00	3.53	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	5.92	98.7	6.00	5.28	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 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
<b>Chloride</b>	<b>48.0</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	10/23/2023	ND	180	90.2	200	2.17		
<b>DRO &gt;C10-C28*</b>	<b>22100</b>	50.0	10/23/2023	ND	196	98.0	200	2.53		
<b>EXT DRO &gt;C28-C36</b>	<b>9450</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 83.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 684 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 2 (.5-1') (H235740-22)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	1.95	97.4	2.00	2.84	
<b>Toluene*</b>	<b>0.181</b>	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
<b>Ethylbenzene*</b>	<b>0.180</b>	0.050	10/23/2023	ND	2.01	101	2.00	1.55	
<b>Total Xylenes*</b>	<b>0.387</b>	0.150	10/23/2023	ND	6.10	102	6.00	0.0889	
<b>Total BTEX</b>	<b>0.748</b>	0.300	10/23/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>48.0</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	10/23/2023	ND	180	90.2	200	2.17		
<b>DRO &gt;C10-C28*</b>	<b>14700</b>	50.0	10/23/2023	ND	196	98.0	200	2.53		
<b>EXT DRO &gt;C28-C36</b>	<b>7230</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 369 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB -2 (1-2') (H235740-23)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	<0.050	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	<0.300	0.300	10/23/2023	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
<b>Chloride</b>	<b>32.0</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>10900</b>	50.0	10/23/2023	ND	182	91.2	200	2.74	QM-07	
<b>EXT DRO &gt;C28-C36</b>	<b>5830</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 69.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 301 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB -2 (2-3') (H235740-24)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	<0.050	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	<0.300	0.300	10/23/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>9660</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>4780</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 69.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 194 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB -2 (3-4') (H235740-25)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	<0.050	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	<0.300	0.300	10/23/2023	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
<b>Chloride</b>	<b>16.0</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>5550</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>3200</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 73.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 165 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 12 (0-.5') (H235740-26)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>23.7</b>	2.00	10/23/2023	ND	1.95	97.4	2.00	2.84	
<b>Toluene*</b>	<b>178</b>	2.00	10/23/2023	ND	2.00	100	2.00	2.45	
<b>Ethylbenzene*</b>	<b>149</b>	2.00	10/23/2023	ND	2.01	101	2.00	1.55	
<b>Total Xylenes*</b>	<b>237</b>	6.00	10/23/2023	ND	6.10	102	6.00	0.0889	
<b>Total BTEX</b>	<b>587</b>	12.0	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 129 % 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
<b>Chloride</b>	<b>3200</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>8180</b>	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>25800</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>5430</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 672 % 48.2-134

Surrogate: 1-Chlorooctadecane 451 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 12 (.5-1') (H235740-27)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>13.9</b>	2.00	10/23/2023	ND	1.95	97.4	2.00	2.84	
<b>Toluene*</b>	<b>168</b>	2.00	10/23/2023	ND	2.00	100	2.00	2.45	
<b>Ethylbenzene*</b>	<b>143</b>	2.00	10/23/2023	ND	2.01	101	2.00	1.55	
<b>Total Xylenes*</b>	<b>215</b>	6.00	10/23/2023	ND	6.10	102	6.00	0.0889	
<b>Total BTEX</b>	<b>541</b>	12.0	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 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
<b>Chloride</b>	<b>1710</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>6940</b>	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>14300</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>2830</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 405 % 48.2-134

Surrogate: 1-Chlorooctadecane 252 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 12 (1-2') (H235740-28)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>6.50</b>	2.00	10/23/2023	ND	1.95	97.4	2.00	2.84	
<b>Toluene*</b>	<b>89.2</b>	2.00	10/23/2023	ND	2.00	100	2.00	2.45	
<b>Ethylbenzene*</b>	<b>83.1</b>	2.00	10/23/2023	ND	2.01	101	2.00	1.55	
<b>Total Xylenes*</b>	<b>134</b>	6.00	10/23/2023	ND	6.10	102	6.00	0.0889	
<b>Total BTEX</b>	<b>313</b>	12.0	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 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
<b>Chloride</b>	<b>2200</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>3610</b>	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>8490</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>1550</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 246 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 12 (2-3') (H235740-29)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>1.88</b>	0.500	10/23/2023	ND	1.95	97.4	2.00	2.84	
<b>Toluene*</b>	<b>38.3</b>	0.500	10/23/2023	ND	2.00	100	2.00	2.45	
<b>Ethylbenzene*</b>	<b>40.1</b>	0.500	10/23/2023	ND	2.01	101	2.00	1.55	
<b>Total Xylenes*</b>	<b>66.9</b>	1.50	10/23/2023	ND	6.10	102	6.00	0.0889	
<b>Total BTEX</b>	<b>147</b>	3.00	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 134 % 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
<b>Chloride</b>	<b>5360</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>1390</b>	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>3690</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>555</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 143 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 12 (3-4') (H235740-30)**

BTEX 8021B		mg/kg		Analyzed By: AW					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Benzene*</b>	<b>1.53</b>	0.200	10/24/2023	ND	1.95	97.4	2.00	2.84		
<b>Toluene*</b>	<b>19.9</b>	0.200	10/24/2023	ND	2.00	100	2.00	2.45		
<b>Ethylbenzene*</b>	<b>22.4</b>	0.200	10/24/2023	ND	2.01	101	2.00	1.55		
<b>Total Xylenes*</b>	<b>38.1</b>	0.600	10/24/2023	ND	6.10	102	6.00	0.0889		
<b>Total BTEX</b>	<b>81.9</b>	1.20	10/24/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 167 % 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	
<b>Chloride</b>	<b>4880</b>	16.0	10/23/2023	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>2260</b>	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>6770</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>1070</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 188 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 13 (0-.5') (H235740-31)**

BTEX 8021B		mg/kg		Analyzed By: AW					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.500	0.500	10/23/2023	ND	1.95	97.4	2.00	2.84		
<b>Toluene*</b>	<b>9.68</b>	0.500	10/23/2023	ND	2.00	100	2.00	2.45		
<b>Ethylbenzene*</b>	<b>41.0</b>	0.500	10/23/2023	ND	2.01	101	2.00	1.55		
<b>Total Xylenes*</b>	<b>81.3</b>	1.50	10/23/2023	ND	6.10	102	6.00	0.0889		
<b>Total BTEX</b>	<b>132</b>	3.00	10/23/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 171 % 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	
<b>Chloride</b>	<b>96.0</b>	16.0	10/23/2023	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>2560</b>	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>15300</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>2970</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 387 % 48.2-134

Surrogate: 1-Chlorooctadecane 276 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 13 (.5-1') (H235740-32)**

BTEX 8021B		mg/kg		Analyzed By: AW					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/24/2023	ND	1.95	97.4	2.00	2.84		
<b>Toluene*</b>	<b>0.455</b>	0.050	10/24/2023	ND	2.00	100	2.00	2.45		
<b>Ethylbenzene*</b>	<b>2.14</b>	0.050	10/24/2023	ND	2.01	101	2.00	1.55		
<b>Total Xylenes*</b>	<b>4.89</b>	0.150	10/24/2023	ND	6.10	102	6.00	0.0889		
<b>Total BTEX</b>	<b>7.48</b>	0.300	10/24/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 191 % 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	
<b>Chloride</b>	<b>128</b>	16.0	10/23/2023	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>229</b>	10.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>2300</b>	10.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>469</b>	10.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 90.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 13 (1-2') (H235740-33)**

BTEX 8021B		mg/kg		Analyzed By: AW					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/24/2023	ND	1.95	97.4	2.00	2.84		
Toluene*	<0.050	0.050	10/24/2023	ND	2.00	100	2.00	2.45		
<b>Ethylbenzene*</b>	<b>0.147</b>	0.050	10/24/2023	ND	2.01	101	2.00	1.55		
<b>Total Xylenes*</b>	<b>0.696</b>	0.150	10/24/2023	ND	6.10	102	6.00	0.0889		
<b>Total BTEX</b>	<b>0.843</b>	0.300	10/24/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 135 % 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	
<b>Chloride</b>	<b>256</b>	16.0	10/23/2023	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>26.9</b>	10.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>706</b>	10.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>155</b>	10.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 82.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 13 (2-3') (H235740-34)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	<0.050	0.050	10/24/2023	ND	2.00	100	2.00	2.45	
<b>Ethylbenzene*</b>	<b>0.093</b>	0.050	10/24/2023	ND	2.01	101	2.00	1.55	
<b>Total Xylenes*</b>	<b>0.267</b>	0.150	10/24/2023	ND	6.10	102	6.00	0.0889	
<b>Total BTEX</b>	<b>0.360</b>	0.300	10/24/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 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
<b>Chloride</b>	<b>1800</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2023	ND	180	89.9	200	0.633	
<b>DRO &gt;C10-C28*</b>	<b>421</b>	10.0	10/23/2023	ND	182	91.2	200	2.74	
<b>EXT DRO &gt;C28-C36</b>	<b>89.8</b>	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 82.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 13 (3-4') (H235740-35)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	<0.050	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	<0.300	0.300	10/23/2023	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
<b>Chloride</b>	<b>1710</b>	16.0	10/23/2023	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	10/23/2023	ND	180	89.9	200	0.633	
<b>DRO &gt;C10-C28*</b>	<b>501</b>	10.0	10/23/2023	ND	182	91.2	200	2.74	
<b>EXT DRO &gt;C28-C36</b>	<b>107</b>	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 14 (0-.5') (H235740-36)**

BTEX 8021B		mg/kg		Analyzed By: AW					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Benzene*</b>	<b>0.120</b>	0.100	10/24/2023	ND	1.95	97.4	2.00	2.84		
<b>Toluene*</b>	<b>2.74</b>	0.100	10/24/2023	ND	2.00	100	2.00	2.45		
<b>Ethylbenzene*</b>	<b>11.2</b>	0.100	10/24/2023	ND	2.01	101	2.00	1.55		
<b>Total Xylenes*</b>	<b>29.9</b>	0.300	10/24/2023	ND	6.10	102	6.00	0.0889		
<b>Total BTEX</b>	<b>44.0</b>	0.600	10/24/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 253 % 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	
<b>Chloride</b>	<b>2400</b>	16.0	10/23/2023	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>1200</b>	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>12400</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>2410</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 255 % 48.2-134

Surrogate: 1-Chlorooctadecane 235 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 14 (.5-1') (H235740-37)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	<0.050	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	<0.300	0.300	10/23/2023	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
<b>Chloride</b>	<b>1960</b>	16.0	10/23/2023	ND	400	100	400	7.69	

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	10/23/2023	ND	180	89.9	200	0.633	
<b>DRO &gt;C10-C28*</b>	<b>145</b>	10.0	10/23/2023	ND	182	91.2	200	2.74	
<b>EXT DRO &gt;C28-C36</b>	<b>23.5</b>	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 76.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 14 (1-2') (H235740-38)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	1.95	97.4	2.00	2.84	
<b>Toluene*</b>	<b>0.085</b>	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
<b>Ethylbenzene*</b>	<b>0.058</b>	0.050	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	<0.300	0.300	10/23/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>496</b>	16.0	10/23/2023	ND	400	100	400	7.69	

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	10/23/2023	ND	180	89.9	200	0.633	
<b>DRO &gt;C10-C28*</b>	<b>34.8</b>	10.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 72.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 14 (2-3') (H235740-39)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	<0.050	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	<0.300	0.300	10/23/2023	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	<b>576</b>	16.0	10/23/2023	ND	400	100	400	7.69	

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	10/23/2023	ND	180	89.9	200	0.633	
<b>DRO &gt;C10-C28*</b>	<b>80.3</b>	10.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 81.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 14 (3-4') (H235740-40)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	<0.050	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	<0.300	0.300	10/23/2023	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	650	16.0	10/23/2023	ND	400	100	400	7.69	

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	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	496	10.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	103	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 80.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 15 (0-.5') (H235740-41)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<2.00	2.00	10/23/2023	ND	1.95	97.4	2.00	2.84	
<b>Toluene*</b>	<b>13.1</b>	2.00	10/23/2023	ND	2.00	100	2.00	2.45	
<b>Ethylbenzene*</b>	<b>27.6</b>	2.00	10/23/2023	ND	2.01	101	2.00	1.55	
<b>Total Xylenes*</b>	<b>66.0</b>	6.00	10/23/2023	ND	6.10	102	6.00	0.0889	
<b>Total BTEX</b>	<b>107</b>	12.0	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 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
<b>Chloride</b>	<b>2160</b>	16.0	10/23/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>2820</b>	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>31500</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>6080</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 643 % 48.2-134

Surrogate: 1-Chlorooctadecane 560 % 49.1-148

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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 15 (.5-1') (H235740-42)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>2.93</b>	2.00	10/23/2023	ND	2.15	107	2.00	0.974	QM-07
<b>Toluene*</b>	<b>13.0</b>	2.00	10/23/2023	ND	2.16	108	2.00	5.19	QM-07
<b>Ethylbenzene*</b>	<b>23.6</b>	2.00	10/23/2023	ND	2.22	111	2.00	3.28	
<b>Total Xylenes*</b>	<b>58.5</b>	6.00	10/23/2023	ND	6.41	107	6.00	4.45	QM-07
<b>Total BTEX</b>	<b>98.1</b>	12.0	10/23/2023	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
<b>Chloride</b>	<b>2160</b>	16.0	10/23/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>2600</b>	50.0	10/23/2023	ND	180	89.9	200	0.633		
<b>DRO &gt;C10-C28*</b>	<b>30500</b>	50.0	10/23/2023	ND	182	91.2	200	2.74		
<b>EXT DRO &gt;C28-C36</b>	<b>5830</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 612 % 48.2-134

Surrogate: 1-Chlorooctadecane 560 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 15 (1-2') (H235740-43)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	10/23/2023	ND	2.15	107	2.00	0.974	
<b>Toluene*</b>	<b>2.35</b>	0.500	10/23/2023	ND	2.16	108	2.00	5.19	
<b>Ethylbenzene*</b>	<b>5.79</b>	0.500	10/23/2023	ND	2.22	111	2.00	3.28	
<b>Total Xylenes*</b>	<b>18.3</b>	1.50	10/23/2023	ND	6.41	107	6.00	4.45	
<b>Total BTEX</b>	<b>26.4</b>	3.00	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 132 % 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
<b>Chloride</b>	<b>1640</b>	16.0	10/23/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>1300</b>	50.0	10/23/2023	ND	220	110	200	1.73	QM-07	
<b>DRO &gt;C10-C28*</b>	<b>12600</b>	50.0	10/23/2023	ND	209	104	200	3.87	QM-07	
<b>EXT DRO &gt;C28-C36</b>	<b>1980</b>	50.0	10/23/2023	ND						

Surrogate: 1-Chlorooctane 149 % 48.2-134

Surrogate: 1-Chlorooctadecane 304 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 15 (2-3') (H235740-44)**

BTEX 8021B		mg/kg		Analyzed By: AW				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	10/23/2023	ND	2.15	107	2.00	0.974	
<b>Toluene*</b>	<b>1.65</b>	0.200	10/23/2023	ND	2.16	108	2.00	5.19	
<b>Ethylbenzene*</b>	<b>8.36</b>	0.200	10/23/2023	ND	2.22	111	2.00	3.28	
<b>Total Xylenes*</b>	<b>16.6</b>	0.600	10/23/2023	ND	6.41	107	6.00	4.45	
<b>Total BTEX</b>	<b>26.6</b>	1.20	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 157 % 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
<b>Chloride</b>	<b>288</b>	16.0	10/23/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>366</b>	50.0	10/23/2023	ND	220	110	200	1.73	
<b>DRO &gt;C10-C28*</b>	<b>3020</b>	50.0	10/23/2023	ND	209	104	200	3.87	
<b>EXT DRO &gt;C28-C36</b>	<b>587</b>	50.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 129 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 15 (3-4') (H235740-45)**

BTEX 8021B		mg/kg		Analyzed By: AW				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.15	107	2.00	0.974	
Toluene*	<0.050	0.050	10/23/2023	ND	2.16	108	2.00	5.19	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.22	111	2.00	3.28	
<b>Total Xylenes*</b>	<b>2.33</b>	0.150	10/23/2023	ND	6.41	107	6.00	4.45	
<b>Total BTEX</b>	<b>2.33</b>	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 151 % 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
<b>Chloride</b>	<b>656</b>	16.0	10/23/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>68.8</b>	10.0	10/23/2023	ND	220	110	200	1.73	
<b>DRO &gt;C10-C28*</b>	<b>832</b>	10.0	10/23/2023	ND	209	104	200	3.87	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 97.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 16 (0-.5') (H235740-46)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.15	107	2.00	0.974	
Toluene*	<0.050	0.050	10/23/2023	ND	2.16	108	2.00	5.19	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.22	111	2.00	3.28	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.41	107	6.00	4.45	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 134 % 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	10/23/2023	ND	400	100	400	7.69	

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	10/23/2023	ND	220	110	200	1.73	
DRO >C10-C28*	1810	10.0	10/23/2023	ND	209	104	200	3.87	
EXT DRO >C28-C36	329	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 16 (.5-1') (H235740-47)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.15	107	2.00	0.974	
<b>Toluene*</b>	<b>0.194</b>	0.050	10/23/2023	ND	2.16	108	2.00	5.19	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.22	111	2.00	3.28	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.41	107	6.00	4.45	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 127 % 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
<b>Chloride</b>	<b>32.0</b>	16.0	10/23/2023	ND	400	100	400	7.69	

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	10/23/2023	ND	220	110	200	1.73	
<b>DRO &gt;C10-C28*</b>	<b>211</b>	10.0	10/23/2023	ND	209	104	200	3.87	
<b>EXT DRO &gt;C28-C36</b>	<b>59.9</b>	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 89.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 16 (1-2') (H235740-48)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.15	107	2.00	0.974	
Toluene*	<0.050	0.050	10/23/2023	ND	2.16	108	2.00	5.19	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.22	111	2.00	3.28	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.41	107	6.00	4.45	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 126 % 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	10/23/2023	ND	400	100	400	7.69	

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	10/23/2023	ND	220	110	200	1.73	
DRO >C10-C28*	165	10.0	10/23/2023	ND	209	104	200	3.87	
EXT DRO >C28-C36	31.8	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 98.7 % 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:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 16 (2-3') (H235740-49)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.15	107	2.00	0.974	
Toluene*	<0.050	0.050	10/23/2023	ND	2.16	108	2.00	5.19	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.22	111	2.00	3.28	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.41	107	6.00	4.45	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 127 % 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	10/23/2023	ND	400	100	400	7.69	

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	10/23/2023	ND	220	110	200	1.73	
DRO >C10-C28*	21.7	10.0	10/23/2023	ND	209	104	200	3.87	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 CHUCK TERHUNE  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	10/19/2023	Sampling Date:	10/19/2023
Reported:	10/25/2023	Sampling Type:	Soil
Project Name:	MCA - 151	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03256	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

**Sample ID: SB - 16 (3-4') (H235740-50)**

BTEX 8021B		mg/kg		Analyzed By: AW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/23/2023	ND	2.15	107	2.00	0.974	
Toluene*	<0.050	0.050	10/23/2023	ND	2.16	108	2.00	5.19	
Ethylbenzene*	<0.050	0.050	10/23/2023	ND	2.22	111	2.00	3.28	
Total Xylenes*	<0.150	0.150	10/23/2023	ND	6.41	107	6.00	4.45	
Total BTEX	<0.300	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 127 % 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	10/23/2023	ND	400	100	400	7.69	

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	10/23/2023	ND	220	110	200	1.73	
DRO >C10-C28*	<10.0	10.0	10/23/2023	ND	209	104	200	3.87	
EXT DRO >C28-C36	<10.0	10.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Custody Record



Tetra Tech, Inc.

901 W. Wall Street, Suite 100  
Midland, Texas 79701  
Tel (432) 682-4559  
Fax (432) 582-3946

Client Name: Maverick Natural Resources

Site Manager: Chuck Terhune

281-755-8965

Project Name: MCA-151

chuck.terhune@tetratech.com

Project Location: Lea County, NM

Project #: 212C-MD-03256

Invoice to: Attn: Chuck Terhune

Receiving Laboratory: Cardinal Labs

Sampler Signature: Jorge Fernandez

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION		SAMPLING		MATRIX				PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)
	YEAR: 2023	DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE				
1	SB-1 (0-5)	10/19/2023		X				X				
2	SB-1 (5-1)	10/19/2023		X				X				
3	SB-3 (0-5)	10/19/2023		X				X				
4	SB-3 (5-1)	10/19/2023		X				X				
5	SB-4 (0-5)	10/19/2023		X				X				
6	SB-4 (5-1)	10/19/2023		X				X				
7	SB-5 (0-5)	10/19/2023		X				X				
8	SB-5 (5-1)	10/19/2023		X				X				
9	SB-6 (0-5)	10/19/2023		X				X				
10	SB-6 (5-1)	10/19/2023		X				X				

ANALYSIS REQUEST  
(Circle or Specify Method No.)

<input checked="" type="checkbox"/>	BTEX 8021B
<input checked="" type="checkbox"/>	BTEX 8260B
<input checked="" type="checkbox"/>	TPH TX1005 (Ext to C35)
<input checked="" type="checkbox"/>	TPH 8015M (GRO - DRO - ORO - MRO)
<input type="checkbox"/>	PAH 8270C
<input type="checkbox"/>	Total Metals Ag As Ba Cd Cr Pb Se Hg
<input type="checkbox"/>	TCLP Metals Ag As Ba Cd Cr Pb Se Hg
<input type="checkbox"/>	TCLP Volatiles
<input type="checkbox"/>	TCLP Semi Volatiles
<input type="checkbox"/>	RCI
<input type="checkbox"/>	GC/MS Vol. 8260B / 624
<input type="checkbox"/>	GC/MS Semi. Vol. 8270C/625
<input type="checkbox"/>	PCB's 8082 / 608
<input type="checkbox"/>	NORM
<input checked="" type="checkbox"/>	PLM (Asbestos)
<input type="checkbox"/>	Chloride
<input type="checkbox"/>	Chloride Sulfate TDS
<input type="checkbox"/>	General Water Chemistry (see attached list)
<input type="checkbox"/>	Anion/Cation Balance
<input type="checkbox"/>	Hold

Relinquished by: *[Signature]* Date: 10-19-23 Time: 10:18

Relinquished by: *[Signature]* Date: 10-19-23 Time: 10:19

Received by: *[Signature]* Date: 10-19-23 Time: 10:19

Received by: *[Signature]* Date: 10-19-23 Time: 10:19

LAB USE ONLY

REMARKS: Standard TAT

RUSH: Same Day 24 hr 48 hr 72 hr

Rush Charges Authorized

Special Report Limits or TRRP Report

ORIGINAL COPY

Analysis Request of Custody Record



# Tetra Tech, Inc.

901 W Wall Street, Ste 100  
Midland, Texas 79701  
Tel (432) 682-4559  
Fax (432) 682-3946

Client Name: **Maverick Natural Resources** Site Manager: **Chuck Terhune**

Project Name: **MCA-151** 281-755-8965  
[chuck.terhune@tetratech.com](mailto:chuck.terhune@tetratech.com)

Project Location: **Lea County, NM** Project #: **212C-MD-03256**

Invoice to: **Attn: Chuck Terhune**  
Receiving Laboratory: **Cardinal Labs** Sampler Signature: **Jorge Fernandez**

Comments:

LAB # **H235740**  
LAB USE ONLY

LAB #	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE				
11	SB-7 (0-5')	10/19/2023		X				X				X
18	SB-7 (.5-1')	10/19/2023		X				X				X
13	SB-8 (0-5')	10/19/2023		X				X				X
14	SB-8 (.5-1')	10/19/2023		X				X				X
15	SB-9 (0-5')	10/19/2023		X				X				X
16	SB-9 (.5-1')	10/19/2023		X				X				X
17	SB-10 (0-5')	10/19/2023		X				X				X
18	SB-10 (.5-1')	10/19/2023		X				X				X
19	SB-11 (0-5')	10/19/2023		X				X				X
20	SB-11 (.5-1')	10/19/2023		X				X				X

Relinquished by: **Chuck Terhune** Date: **10-16-23** Time: **1:40 PM**

Relinquished by: **Jorge Fernandez** Date: **10-19-23** Time: **10:19 AM**

Relinquished by: **Jorge Fernandez** Date: **10-19-23** Time: **10:19 AM**

**ANALYSIS REQUEST**  
(Circle or Specify Method No.)

<input checked="" type="checkbox"/>	BTEX 8021B
<input checked="" type="checkbox"/>	BTEX 8260B
<input checked="" type="checkbox"/>	TPH TX1005 (Ext to C35)
<input checked="" type="checkbox"/>	TPH 8015M ( GRO - DRO - ORO - MRO)
<input checked="" type="checkbox"/>	PAH 8270C
<input checked="" type="checkbox"/>	Total Metals Ag As Ba Cd Cr Pb Se Hg
<input checked="" type="checkbox"/>	TCLP Metals Ag As Ba Cd Cr Pb Se Hg
<input checked="" type="checkbox"/>	TCLP Volatiles
<input checked="" type="checkbox"/>	TCLP Semi Volatiles
<input checked="" type="checkbox"/>	RCI
<input checked="" type="checkbox"/>	GC/MS Vol. 8260B / 624
<input checked="" type="checkbox"/>	GC/MS Semi. Vol. 8270C/625
<input checked="" type="checkbox"/>	PCB's 8082 / 608
<input checked="" type="checkbox"/>	NORM
<input checked="" type="checkbox"/>	PLM (Asbestos)
<input checked="" type="checkbox"/>	Chloride
<input checked="" type="checkbox"/>	Chloride Sulfate TDS
<input checked="" type="checkbox"/>	General Water Chemistry (see attached list)
<input checked="" type="checkbox"/>	Anion/Cation Balance
<input checked="" type="checkbox"/>	Hold

LAB USE ONLY  
REMARKS: **Standard TAT**

Sample Temperature: **5-3°C**  
 RUSH: Same Day 24 hr 48 hr 72 hr  
 Rush Charges Authorized  
 Special Report Limits or TRRP Report

ORIGINAL COPY



Analysis Request of Chain of Custody Record



# Tetra Tech, Inc.

901 W. Wall Street, Ste 100  
Midland, Texas 79701  
Tel (432) 682-4559  
Fax (432) 682-3946

Client Name: **Maverick Natural Resources** Site Manager: **Chuck Terhune**

Project Name: **MCA-151** Project #: **chuck.terhune@tetratech.com**

Project Location: **Lea County, NM** Project #: **212C-MD-03256**

Invoice to: **Attn: Chuck Terhune**

Receiving Laboratory: **Cardinal Labs** Sampler Signature: **Jorge Fernandez**

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD			# CONTAINERS	FILTERED (Y/N)
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE		
31	SB-13 (0-5')	10/19/2023		X				X		
32	SB-13 (.5-1')	10/19/2023		X				X		
33	SB-13 (1-2')	10/19/2023		X				X		
34	SB-13 (2-3')	10/19/2023		X				X		
35	SB-13 (3-4')	10/19/2023		X				X		
36	SB-14 (0-5')	10/19/2023		X				X		
37	SB-14 (.5-1')	10/19/2023		X				X		
38	SB-14 (1-2')	10/19/2023		X				X		
39	SB-14 (2-3')	10/19/2023		X				X		
40	SB-14 (3-4')	10/19/2023		X				X		

Relinquished by: **Lea Hernandez V. 10-19-23** Date: **10-19-23** Time: **16:18**

Relinquished by: **[Signature]** Date: **10-19-23** Time: **10:19**

Received by: **[Signature]** Date: **10-19-23** Time: **10:19**

Received by: **[Signature]** Date: **10-19-23** Time: **10:19**

**ANALYSIS REQUEST**  
(Circle or Specify Method No.)

<input checked="" type="checkbox"/>	BTEX 8021B
<input checked="" type="checkbox"/>	BTEX 8260B
<input checked="" type="checkbox"/>	TPH TX1005 (Ext to C35)
<input checked="" type="checkbox"/>	TPH 8015M (GRO - DRO - ORO - MRO)
<input checked="" type="checkbox"/>	PAH 8270C
<input checked="" type="checkbox"/>	Total Metals Ag As Ba Cd Cr Pb Se Hg
<input checked="" type="checkbox"/>	TCLP Metals Ag As Ba Cd Cr Pb Se Hg
<input checked="" type="checkbox"/>	TCLP Volatiles
<input checked="" type="checkbox"/>	TCLP Semi Volatiles
<input checked="" type="checkbox"/>	RCI
<input checked="" type="checkbox"/>	GC/MS Vol. 8260B / 624
<input checked="" type="checkbox"/>	GC/MS Semi. Vol. 8270C/625
<input checked="" type="checkbox"/>	PCB's 8082 / 608
<input checked="" type="checkbox"/>	NORM
<input checked="" type="checkbox"/>	PLM (Asbestos)
<input checked="" type="checkbox"/>	Chloride
<input checked="" type="checkbox"/>	Chloride Sulfate TDS
<input checked="" type="checkbox"/>	General Water Chemistry (see attached list)
<input checked="" type="checkbox"/>	Anion/Cation Balance
<input checked="" type="checkbox"/>	Hold

**LAB USE ONLY**

Sample Temperature: **5-3i**

REMARKS: **Standard TAT**

RUSH: Same Day 24 hr 48 hr 72 hr

Rush Charges Authorized

Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking # **#140**

ORIGINAL COPY

Analysis Request of Chain of Custody Record



# Tetra Tech, Inc.

901 W Wall Street, Ste 100  
Midland, Texas 79701  
Tel (432) 682-4559  
Fax (432) 682-3946

Client Name: **Maverick Natural Resources** Site Manager: **Chuck Terhune**

Project Name: **MCA-151** Project #: **281-755-8965**  
[chuck.terhune@tetratech.com](mailto:chuck.terhune@tetratech.com)

Project Location: **Lea County, NM** Project #: **212C-MD-03256**

Invoice to: **Attn: Chuck Terhune**

Receiving Laboratory: **Cardinal Labs** Sampler Signature: **Jorge Fernandez**

Comments:

LAB # **4035740**  
(LAB USE ONLY)

### SAMPLE IDENTIFICATION

LAB #	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD			# CONTAINERS	FILTERED (Y/N)
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE		
41	SB-15 (0-5')	10/19/2023		X				X		
42	SB-15 (.5-1')	10/19/2023		X				X		
43	SB-15 (1-2')	10/19/2023		X				X		
44	SB-15 (2-3')	10/19/2023		X				X		
45	SB-15 (3-4')	10/19/2023		X				X		
46	SB-16 (0-5')	10/19/2023		X				X		
47	SB-16 (.5-1')	10/19/2023		X				X		
48	SB-16 (1-2')	10/19/2023		X				X		
49	SB-16 (2-3')	10/19/2023		X				X		
50	SB-16 (3-4')	10/19/2023		X				X		

Relinquished by: *[Signature]* Date: **10-19-23** Time: **16:18**

Relinquished by: *[Signature]* Date: **10-19-22** Time: **10:19**

Received by: *[Signature]* Date: **10-19-23** Time: **10:19**

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

### ANALYSIS REQUEST (Circle or Specify Method No.)

<input checked="" type="checkbox"/>	BTEX 8021B
<input checked="" type="checkbox"/>	BTEX 8260B
<input checked="" type="checkbox"/>	TPH TX1005 (Ext to C35)
<input checked="" type="checkbox"/>	TPH 8015M (GRO - DRO - ORO - MRO)
<input checked="" type="checkbox"/>	PAH 8270C
<input checked="" type="checkbox"/>	Total Metals Ag As Ba Cd Cr Pb Se Hg
<input checked="" type="checkbox"/>	TCLP Metals Ag As Ba Cd Cr Pb Se Hg
<input checked="" type="checkbox"/>	TCLP Volatiles
<input checked="" type="checkbox"/>	TCLP Semi Volatiles
<input checked="" type="checkbox"/>	RCI
<input checked="" type="checkbox"/>	GC/MS Vol. 8260B / 624
<input checked="" type="checkbox"/>	GC/MS Semi. Vol. 8270C/625
<input checked="" type="checkbox"/>	PCB's 8082 / 608
<input checked="" type="checkbox"/>	NORM
<input checked="" type="checkbox"/>	PLM (Asbestos)
<input checked="" type="checkbox"/>	Chloride
<input checked="" type="checkbox"/>	Chloride Sulfate TDS
<input checked="" type="checkbox"/>	General Water Chemistry (see attached list)
<input checked="" type="checkbox"/>	Anion/Cation Balance
<input checked="" type="checkbox"/>	Hold

LAB USE ONLY

REMARKS: Standard TAT

Sample Temperature: **5-8°C**

RUSH: Same Day 24 hr 48 hr 72 hr

Rush Charges Authorized

Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking # **#140**



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

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July 17, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA UNIT 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 07/12/24 14:09.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/12/2024	Sampling Date:	07/12/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808,-103.7725		

**Sample ID: SB-15 5 (H244179-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2024	ND	2.02	101	2.00	0.920	
Toluene*	<0.050	0.050	07/15/2024	ND	2.03	101	2.00	1.56	
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.08	104	2.00	2.24	
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.11	102	6.00	2.12	
Total BTEX	<0.300	0.300	07/15/2024	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	320	16.0	07/15/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2024	ND	208	104	200	2.61	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	195	97.5	200	3.26	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 91.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.6 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/12/2024	Sampling Date:	07/12/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808,-103.7725		

**Sample ID: SB-15 8 (H244179-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2024	ND	2.02	101	2.00	0.920	
Toluene*	<0.050	0.050	07/15/2024	ND	2.03	101	2.00	1.56	
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.08	104	2.00	2.24	
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.11	102	6.00	2.12	
Total BTEX	<0.300	0.300	07/15/2024	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	224	16.0	07/15/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2024	ND	196	98.1	200	6.69	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	195	97.5	200	5.86	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/12/2024	Sampling Date:	07/12/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808,-103.7725		

**Sample ID: SB-14 5 (H244179-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2024	ND	2.02	101	2.00	0.920	
Toluene*	<0.050	0.050	07/15/2024	ND	2.03	101	2.00	1.56	
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.08	104	2.00	2.24	
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.11	102	6.00	2.12	
Total BTEX	<0.300	0.300	07/15/2024	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	608	16.0	07/15/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2024	ND	196	98.1	200	6.69	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	195	97.5	200	5.86	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/12/2024	Sampling Date:	07/12/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808,-103.7725		

**Sample ID: SB-14 9 (H244179-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2024	ND	2.02	101	2.00	0.920	
Toluene*	<0.050	0.050	07/15/2024	ND	2.03	101	2.00	1.56	
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.08	104	2.00	2.24	
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.11	102	6.00	2.12	
Total BTEX	<0.300	0.300	07/15/2024	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	320	16.0	07/15/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2024	ND	196	98.1	200	6.69	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	195	97.5	200	5.86	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 97.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/12/2024	Sampling Date:	07/12/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808,-103.7725		

**Sample ID: SB-13 7 (H244179-05)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2024	ND	2.02	101	2.00	0.920	
Toluene*	<0.050	0.050	07/15/2024	ND	2.03	101	2.00	1.56	
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.08	104	2.00	2.24	
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.11	102	6.00	2.12	
Total BTEX	<0.300	0.300	07/15/2024	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	1100	16.0	07/15/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2024	ND	196	98.1	200	6.69	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	195	97.5	200	5.86	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/12/2024	Sampling Date:	07/12/2024
Reported:	07/17/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808,-103.7725		

**Sample ID: SB-13 8 (H244179-06)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2024	ND	2.02	101	2.00	0.920	
Toluene*	<0.050	0.050	07/15/2024	ND	2.03	101	2.00	1.56	
Ethylbenzene*	<0.050	0.050	07/15/2024	ND	2.08	104	2.00	2.24	
Total Xylenes*	<0.150	0.150	07/15/2024	ND	6.11	102	6.00	2.12	
Total BTEX	<0.300	0.300	07/15/2024	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	880	16.0	07/15/2024	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/15/2024	ND	196	98.1	200	6.69	
DRO >C10-C28*	<10.0	10.0	07/15/2024	ND	195	97.5	200	5.86	
EXT DRO >C28-C36	<10.0	10.0	07/15/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*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

**BWL 10**

ANALYSIS REQUEST

Company Name: Ensolum, LLC  
 Project Manager: Aimee Cole  
 Address: 3122 National Parks Hwy  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: (720) 384-7365 Fax #: \_\_\_\_\_  
 Project #: 05E8057102 Project Owner: \_\_\_\_\_  
 Project Name: MCA 151 Flowline Release  
 Project Location: 32,808, -103,7925  
 Sampler Name: Mario Sarras  
 P.O. #: \_\_\_\_\_ Company: Ensolum, LLC  
 Attn: Aimee Cole  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
H244179	SB-15	5	G	1							7/18/24	0954	BTEX
	SB-15	8	G	1								1005	TPH
	SB-14	5	G	1								1047	Chlorides
	SB-14	9	G	1								1227	
	SB-13	7	G	1								1119	
	SB-13	8	G	1								1127	

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Relinquished By: \_\_\_\_\_ Date: 7/18/24  
 Received By: Aimee Cole Date: 7/18/24  
 Turnaround Time: Standard Rush  
 Verbal Result:  Yes  No Add'l Phone #: \_\_\_\_\_  
 All Results are emailed. Please provide Email address: Aimee@ensolum.com/mssas@ensolum.com/hamilton@ensolum.com  
 REMARKS: \_\_\_\_\_

Delivered By: (Circle One) Observed Temp. °C Sample Condition Checked By: (Initials)  
 Cooler Intact  Yes  No  
 Sample Intact  Yes  No  
 Corrected Temp. °C \_\_\_\_\_  
 Bacteria (only) Sample Condition  
 Cool Intact  Yes  No  
 Observed Temp. °C \_\_\_\_\_  
 Corrected Temp. °C \_\_\_\_\_



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---

July 19, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA UNIT 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 07/15/24 15:44.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Tamara Oldaker
Project Location:	32.808,-103.7725		

**Sample ID: SB - 12 5 (H244210-01)**

BTEX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/16/2024	ND	1.92	96.0	2.00	2.68	
<b>Toluene*</b>	<b>0.310</b>	0.050	07/16/2024	ND	1.92	95.8	2.00	2.09	GC-NC1
<b>Ethylbenzene*</b>	<b>1.04</b>	0.050	07/16/2024	ND	1.96	98.0	2.00	0.826	
<b>Total Xylenes*</b>	<b>2.57</b>	0.150	07/16/2024	ND	5.77	96.2	6.00	0.655	
<b>Total BTEX</b>	<b>3.92</b>	0.300	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 213 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3000</b>	16.0	07/16/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>366</b>	50.0	07/16/2024	ND	205	102	200	4.76	
<b>DRO &gt;C10-C28*</b>	<b>4560</b>	50.0	07/16/2024	ND	196	98.2	200	2.44	
<b>EXT DRO &gt;C28-C36</b>	<b>656</b>	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 162 % 48.2-134

Surrogate: 1-Chlorooctadecane 180 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Tamara Oldaker
Project Location:	32.808,-103.7725		

**Sample ID: SB - 12 8 (H244210-02)**

BTEX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/16/2024	ND	1.92	96.0	2.00	2.68	
Toluene*	<0.050	0.050	07/16/2024	ND	1.92	95.8	2.00	2.09	GC-NC
<b>Ethylbenzene*</b>	<b>2.04</b>	0.050	07/16/2024	ND	1.96	98.0	2.00	0.826	
<b>Total Xylenes*</b>	<b>0.759</b>	0.150	07/16/2024	ND	5.77	96.2	6.00	0.655	
<b>Total BTEX</b>	<b>2.80</b>	0.300	07/16/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 391 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	07/16/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>393</b>	50.0	07/16/2024	ND	205	102	200	4.76	
<b>DRO &gt;C10-C28*</b>	<b>9840</b>	50.0	07/16/2024	ND	196	98.2	200	2.44	
<b>EXT DRO &gt;C28-C36</b>	<b>1870</b>	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 145 % 48.2-134

Surrogate: 1-Chlorooctadecane 242 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Tamara Oldaker
Project Location:	32.808,-103.7725		

**Sample ID: SB - 2 6 (H244210-03)**

BTEX 8021B		mg/kg		Analyzed By: JH				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	07/16/2024	ND	1.92	96.0	2.00	2.68	
Toluene*	<0.100	0.100	07/16/2024	ND	1.92	95.8	2.00	2.09	GC-NC
<b>Ethylbenzene*</b>	<b>10.1</b>	0.100	07/16/2024	ND	1.96	98.0	2.00	0.826	
<b>Total Xylenes*</b>	<b>6.51</b>	0.300	07/16/2024	ND	5.77	96.2	6.00	0.655	GC-NC1
<b>Total BTEX</b>	<b>16.6</b>	0.600	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 293 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	07/16/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>1150</b>	50.0	07/16/2024	ND	205	102	200	4.76	
<b>DRO &gt;C10-C28*</b>	<b>15300</b>	50.0	07/16/2024	ND	196	98.2	200	2.44	
<b>EXT DRO &gt;C28-C36</b>	<b>2790</b>	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 178 % 48.2-134

Surrogate: 1-Chlorooctadecane 313 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	07/15/2024	Sampling Date:	07/15/2024
Reported:	07/19/2024	Sampling Type:	Soil
Project Name:	MCA UNIT 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Tamara Oldaker
Project Location:	32.808,-103.7725		

**Sample ID: SB - 2 8 (H244210-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/16/2024	ND	1.92	96.0	2.00	2.68	
Toluene*	<0.050	0.050	07/16/2024	ND	1.92	95.8	2.00	2.09	
<b>Ethylbenzene*</b>	<b>0.089</b>	0.050	07/16/2024	ND	1.96	98.0	2.00	0.826	
<b>Total Xylenes*</b>	<b>0.151</b>	0.150	07/16/2024	ND	5.77	96.2	6.00	0.655	GC-NC1
Total BTEX	<0.300	0.300	07/16/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>3120</b>	16.0	07/16/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>19.7</b>	10.0	07/16/2024	ND	205	102	200	4.76		
<b>DRO &gt;C10-C28*</b>	<b>844</b>	10.0	07/16/2024	ND	196	98.2	200	2.44		
<b>EXT DRO &gt;C28-C36</b>	<b>145</b>	10.0	07/16/2024	ND						

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 155 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
GC-NC 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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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: Aimee Cole

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: (720) 384-7365

Project #: 03E2057102

Project Name: MTA 151 Flowline Release

Project Location: 3A, 909, -103, 7725

Sampler Name: Maf 10 Sam 15

P.O. #:

Company: Ensolum, LLC

Attn: Aimee Cole

Address:

City:

State:

Phone #:

Fax #:

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :				
4244210	1 SB-12	5	G								7/15/24	1205	BTEX	
	2 SB-12	8	G								12/14	1316	TPH	
	3 SB-2	6	G								13/16	1321	Chlorides	
	4 SB-2	8	G											

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: *[Signature]* Date: 7/15/24  
 Received By: *[Signature]* Date: 7/15/24  
 Remarks: acole@ensolum.com / msarkh5@ensolum.com

Delivered By: (Circle One)  Observed Temp. °C 86  Corrected Temp. °C  
 Sampler - UPS - Bus - Other:  Cool  Intact  Yes  No  
 CHECKED BY: *[Signature]*  
 Turnaround Time:  Standard  Bacteria (only) Sample Condition  
 Thermometer ID #44 *[Signature]*  Cool  Intact  Yes  No  
 Correction Factor 0.5°C *[Signature]*  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

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August 07, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 08/01/24 16:28.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 02 0-3 (H244631-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2024	ND	1.94	96.8	2.00	5.34	
Toluene*	<0.050	0.050	08/05/2024	ND	1.90	94.8	2.00	4.55	
Ethylbenzene*	<0.050	0.050	08/05/2024	ND	1.92	95.9	2.00	3.63	
Total Xylenes*	<0.150	0.150	08/05/2024	ND	5.66	94.3	6.00	3.38	
Total BTEX	<0.300	0.300	08/05/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55	
DRO >C10-C28*	<10.0	10.0	08/05/2024	ND	185	92.6	200	9.71	
EXT DRO >C28-C36	<10.0	10.0	08/05/2024	ND					

Surrogate: 1-Chlorooctane 71.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 03 0-3 (H244631-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2024	ND	1.94	96.8	2.00	5.34	
Toluene*	<0.050	0.050	08/05/2024	ND	1.90	94.8	2.00	4.55	
Ethylbenzene*	<0.050	0.050	08/05/2024	ND	1.92	95.9	2.00	3.63	
Total Xylenes*	<0.150	0.150	08/05/2024	ND	5.66	94.3	6.00	3.38	
Total BTEX	<0.300	0.300	08/05/2024	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	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55	
DRO >C10-C28*	<10.0	10.0	08/05/2024	ND	185	92.6	200	9.71	
EXT DRO >C28-C36	<10.0	10.0	08/05/2024	ND					

Surrogate: 1-Chlorooctane 65.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 62.1 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 04 0-3 (H244631-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2024	ND	1.94	96.8	2.00	5.34	
Toluene*	<0.050	0.050	08/05/2024	ND	1.90	94.8	2.00	4.55	
Ethylbenzene*	<0.050	0.050	08/05/2024	ND	1.92	95.9	2.00	3.63	
Total Xylenes*	<0.150	0.150	08/05/2024	ND	5.66	94.3	6.00	3.38	
Total BTEX	<0.300	0.300	08/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	<16.0	16.0	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55	
DRO >C10-C28*	<10.0	10.0	08/05/2024	ND	185	92.6	200	9.71	
EXT DRO >C28-C36	<10.0	10.0	08/05/2024	ND					

Surrogate: 1-Chlorooctane 65.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 65.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 05 0-3 (H244631-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2024	ND	1.94	96.8	2.00	5.34	
Toluene*	<0.050	0.050	08/05/2024	ND	1.90	94.8	2.00	4.55	
Ethylbenzene*	<0.050	0.050	08/05/2024	ND	1.92	95.9	2.00	3.63	
Total Xylenes*	<0.150	0.150	08/05/2024	ND	5.66	94.3	6.00	3.38	
Total BTEX	<0.300	0.300	08/05/2024	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	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55	
DRO >C10-C28*	<10.0	10.0	08/05/2024	ND	185	92.6	200	9.71	
EXT DRO >C28-C36	<10.0	10.0	08/05/2024	ND					

Surrogate: 1-Chlorooctane 59.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 56.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 01 3 (H244631-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/05/2024	ND	1.94	96.8	2.00	5.34		
Toluene*	<0.050	0.050	08/05/2024	ND	1.90	94.8	2.00	4.55		
Ethylbenzene*	<0.050	0.050	08/05/2024	ND	1.92	95.9	2.00	3.63		
Total Xylenes*	<0.150	0.150	08/05/2024	ND	5.66	94.3	6.00	3.38		
Total BTEX	<0.300	0.300	08/05/2024	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	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55		
DRO >C10-C28*	<10.0	10.0	08/05/2024	ND	185	92.6	200	9.71		
EXT DRO >C28-C36	<10.0	10.0	08/05/2024	ND						

Surrogate: 1-Chlorooctane 71.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 02 3 (H244631-06)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/05/2024	ND	1.94	96.8	2.00	5.34		
Toluene*	<0.050	0.050	08/05/2024	ND	1.90	94.8	2.00	4.55		
Ethylbenzene*	<0.050	0.050	08/05/2024	ND	1.92	95.9	2.00	3.63		
Total Xylenes*	<0.150	0.150	08/05/2024	ND	5.66	94.3	6.00	3.38		
Total BTEX	<0.300	0.300	08/05/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 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	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55		
DRO >C10-C28*	<10.0	10.0	08/05/2024	ND	185	92.6	200	9.71		
EXT DRO >C28-C36	<10.0	10.0	08/05/2024	ND						

Surrogate: 1-Chlorooctane 71.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 03 3 (H244631-07)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2024	ND	2.02	101	2.00	0.147	
Toluene*	<0.050	0.050	08/05/2024	ND	2.10	105	2.00	0.998	
Ethylbenzene*	<0.050	0.050	08/05/2024	ND	2.17	109	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/05/2024	ND	6.64	111	6.00	1.38	
Total BTEX	<0.300	0.300	08/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 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	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55	
DRO >C10-C28*	<10.0	10.0	08/05/2024	ND	185	92.6	200	9.71	
EXT DRO >C28-C36	<10.0	10.0	08/05/2024	ND					

Surrogate: 1-Chlorooctane 64.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 61.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 04 3 (H244631-08)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2024	ND	2.02	101	2.00	0.147	
Toluene*	<0.050	0.050	08/05/2024	ND	2.10	105	2.00	0.998	
Ethylbenzene*	<0.050	0.050	08/05/2024	ND	2.17	109	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/05/2024	ND	6.64	111	6.00	1.38	
Total BTEX	<0.300	0.300	08/05/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 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	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55	
DRO >C10-C28*	<10.0	10.0	08/05/2024	ND	185	92.6	200	9.71	
EXT DRO >C28-C36	<10.0	10.0	08/05/2024	ND					

Surrogate: 1-Chlorooctane 69.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.9 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 07 4 (H244631-09)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2024	ND	2.02	101	2.00	0.147	
Toluene*	<0.050	0.050	08/05/2024	ND	2.10	105	2.00	0.998	
<b>Ethylbenzene*</b>	<b>0.063</b>	0.050	08/05/2024	ND	2.17	109	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/05/2024	ND	6.64	111	6.00	1.38	
Total BTEX	<0.300	0.300	08/05/2024	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
<b>Chloride</b>	<b>416</b>	16.0	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55	
<b>DRO &gt;C10-C28*</b>	<b>876</b>	10.0	08/05/2024	ND	185	92.6	200	9.71	
<b>EXT DRO &gt;C28-C36</b>	<b>215</b>	10.0	08/05/2024	ND					

Surrogate: 1-Chlorooctane 77.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.0 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/01/2024	Sampling Date:	08/01/2024
Reported:	08/07/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 08 0-4 (H244631-10)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/05/2024	ND	2.02	101	2.00	0.147	
Toluene*	<0.050	0.050	08/05/2024	ND	2.10	105	2.00	0.998	
Ethylbenzene*	<0.050	0.050	08/05/2024	ND	2.17	109	2.00	1.31	
Total Xylenes*	<0.150	0.150	08/05/2024	ND	6.64	111	6.00	1.38	
Total BTEX	<0.300	0.300	08/05/2024	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	112	16.0	08/06/2024	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	08/05/2024	ND	185	92.6	200	3.55	
DRO >C10-C28*	<10.0	10.0	08/05/2024	ND	185	92.6	200	9.71	
EXT DRO >C28-C36	<10.0	10.0	08/05/2024	ND					

Surrogate: 1-Chlorooctane 65.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 64.5 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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*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: Ensolum, LLC

Project Manager: Aimee Cole

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: (720) 384-7365

State: NM Zip: 88220

Project #: 03E2057102

Fax #:

Project Name: MCA 151 Flowline Release

Project Location: 3R, 808, -103.7725-

Sampler Name: Mario Sackis

FOR LAB USE ONLY

BLU TO

P.O. #:

Company: Ensolum, LLC

Attn: Aimee Cole

Address:

City:

State: Zip:

Phone #:

Fax #:

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
H244631	1 Sw02	0-3	✓	1	✓	✓	✓	✓	✓	✓	✓	8/1/24	1056	BTEX
	2 Sw03	0-3	✓	1	✓	✓	✓	✓	✓	✓	✓		1059	TPH
	3 Sw04	0-3	✓	1	✓	✓	✓	✓	✓	✓	✓		1102	Chlorides
	4 Sw05	0-3	✓	1	✓	✓	✓	✓	✓	✓	✓		1054	
	5 F501	3	✓	1	✓	✓	✓	✓	✓	✓	✓		1103	
	6 F502	3	✓	1	✓	✓	✓	✓	✓	✓	✓		1054	
	7 F503	3	✓	1	✓	✓	✓	✓	✓	✓	✓		1101	
	8 F504	3	✓	1	✓	✓	✓	✓	✓	✓	✓		1046	
	9 F507	4	✓	1	✓	✓	✓	✓	✓	✓	✓		1104	
	10 Sw08	0-4	✓	1	✓	✓	✓	✓	✓	✓	✓		1348	
													1351	

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Abandoned By: [Signature]  
Received By: [Signature]  
Date: 8/1/24  
Time: 10:58

Delivered By: (Circle One)  
Cool Intact  Yes  No  
Sample Condition  Intact  Cool  Intact  Yes  No  
CHECKED BY: [Signature] (Initials)

Observed Temp. °C: 36.0  
Corrected Temp. °C: [Blank]  
Turnaround Time: Standard  Rush

Thermometer ID #113  
Correction Factor 0.556  
Standard #140  
Bacteria (only)  Yes  No  
Cool Intact  Yes  No  
Sample Condition  Observed Temp. °C  
Corrected Temp. °C

Remarks: acole@ensolum.com / msackis@ensolum.com



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

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August 12, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 08/09/24 11:22.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/09/2024	Sampling Date:	08/09/2024
Reported:	08/12/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Tamara Oldaker
Project Location:	32.808, -103.7725		

**Sample ID: FS 13 6' (H244820-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/09/2024	ND	2.08	104	2.00	2.47	
Toluene*	<0.050	0.050	08/09/2024	ND	2.03	102	2.00	2.03	
Ethylbenzene*	<0.050	0.050	08/09/2024	ND	2.06	103	2.00	1.79	
Total Xylenes*	<0.150	0.150	08/09/2024	ND	6.07	101	6.00	1.63	
Total BTEX	<0.300	0.300	08/09/2024	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	1780	16.0	08/12/2024	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/09/2024	ND	227	114	200	4.23	
DRO >C10-C28*	148	10.0	08/09/2024	ND	218	109	200	2.61	
EXT DRO >C28-C36	21.5	10.0	08/09/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 133 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Notes and Definitions**

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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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

Project Manager: Aimee Cole  
Address: 3122 National Parks Hwy  
City: Carlsbad  
Phone #: (720) 384-7365  
Project #: 03E2057102  
Project Name: 32,808-103.7725/MCA 151  
Project Location:  
Sampler Name: Marcio Sarrkis

State: NM Zip: 88220  
Fax #:   
Company: ENSOLUW, LLC  
Attn: Aimee Cole  
Address:  
City:  
State: Zip:

P.O. #:   
Phone #:   
Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS REQUEST
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
AZ44820	1FS13	6	C	1								8/19/24	0901	BTEX TPH Chlorides

USE 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 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.

Inquired By:   
Date: 8/19/24  
Time: 1:22  
Received By:   
Date: 8/19/24  
Time:   
Remarks:   
All Results are emailed. Please provide Email address:   
aco@ensoluw.com/msarrkis@ensoluw.com

Observed Temp.: 3.5  
Corrected Temp.: 2.9  
Sample Condition: Cool Intact  
Checked By:   
Turnaround Time: Standard Rush  
Thermometer ID: #140  
Correction Factor: -0.5C  
Bacteria (only) Sample Condition: Cool Intact

Delivered By: (Circle One)  
Carrier - UPS - Bus - Other:  
Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



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

---

August 15, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 08/14/24 14:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/14/2024	Sampling Date:	08/14/2024
Reported:	08/15/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: FS 14 6' (H244924-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/14/2024	ND	2.07	104	2.00	10.2	
Toluene*	<0.050	0.050	08/14/2024	ND	2.02	101	2.00	10.6	
Ethylbenzene*	<0.050	0.050	08/14/2024	ND	2.03	101	2.00	11.2	
Total Xylenes*	<0.150	0.150	08/14/2024	ND	5.95	99.1	6.00	11.6	
Total BTEX	<0.300	0.300	08/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/15/2024	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	08/14/2024	ND	220	110	200	3.61	
DRO >C10-C28*	<10.0	10.0	08/14/2024	ND	225	113	200	7.37	
EXT DRO >C28-C36	<10.0	10.0	08/14/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 140 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene

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: Aimee Cole

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: (720) 384-7365

Project #: 03E0057102

Project Name: MCA UNIT 151 Flowline Release

Project Location: 32.808, -103.7725

Sampler Name: MARCO SARKIS

**BILL TO** ANALYSIS REQUEST

P.O. #: Company: Ensolum, LLC

Attn: Aimee Cole

Address:

City: State: Zip:

Phone #: Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS REQUEST
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
1	F514	6	C	1								8/14/24	0950	BTEX TPH Chlorides
<i>[Handwritten signature]</i>														

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: [Signature] Date: 8/14/24 Received By: [Signature]

Relinquished By: [Signature] Date: 8/14/24 Received By: [Signature]

Delivered By: (Circle One) Observed Temp. °C: 34°C Corrected Temp. °C: 28°C

Sampler - UPS - Bus - Other: Sample Condition Cool Intact Yes No

Checked By: (Initials) [Signature]

Turnaround Time: Standard [ ] Rush [X] 24-HR [ ]

Barteria (only) Sample Condition Cool Intact Yes No Corrected Temp. °C

REMARKS: ACOLE@ENSOLUM.COM / MSARKIS@ENSOLUM.COM



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

---

August 30, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 08/26/24 15:39.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 08 7 (H245180-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.01	100	2.00	8.22	
Toluene*	<0.050	0.050	08/27/2024	ND	2.04	102	2.00	7.61	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.09	104	2.00	7.14	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	6.35	106	6.00	7.35	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 96.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 09 7 (H245180-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.01	100	2.00	8.22	
Toluene*	<0.050	0.050	08/27/2024	ND	2.04	102	2.00	7.61	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.09	104	2.00	7.14	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	6.35	106	6.00	7.35	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 93.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 10 6 (H245180-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.01	100	2.00	8.22	
Toluene*	<0.050	0.050	08/27/2024	ND	2.04	102	2.00	7.61	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.09	104	2.00	7.14	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	6.35	106	6.00	7.35	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 83.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.9 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 11 7 (H245180-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/27/2024	ND	2.01	100	2.00	8.22		
Toluene*	<0.050	0.050	08/27/2024	ND	2.04	102	2.00	7.61		
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.09	104	2.00	7.14		
Total Xylenes*	<0.150	0.150	08/27/2024	ND	6.35	106	6.00	7.35		
Total BTEX	<0.300	0.300	08/27/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	624	16.0	08/28/2024	ND	432	108	400	3.64		

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	08/27/2024	ND	198	99.2	200	6.50		
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39		
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND						

Surrogate: 1-Chlorooctane 89.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 15 7 (H245180-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/27/2024	ND	2.01	100	2.00	8.22		
Toluene*	<0.050	0.050	08/27/2024	ND	2.04	102	2.00	7.61		
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.09	104	2.00	7.14		
Total Xylenes*	<0.150	0.150	08/27/2024	ND	6.35	106	6.00	7.35		
Total BTEX	<0.300	0.300	08/27/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	08/28/2024	ND	432	108	400	3.64		

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	08/27/2024	ND	198	99.2	200	6.50		
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39		
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND						

Surrogate: 1-Chlorooctane 96.4 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 16 6 (H245180-06)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.01	100	2.00	8.22	
Toluene*	<0.050	0.050	08/27/2024	ND	2.04	102	2.00	7.61	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.09	104	2.00	7.14	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	6.35	106	6.00	7.35	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 95.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 17 6 (H245180-07)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.01	100	2.00	8.22	
Toluene*	<0.050	0.050	08/27/2024	ND	2.04	102	2.00	7.61	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.09	104	2.00	7.14	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	6.35	106	6.00	7.35	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	127	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	11.9	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 95.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 06 0-4 (H245180-08)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.25	112	2.00	1.92	
Toluene*	<0.050	0.050	08/27/2024	ND	2.31	115	2.00	1.63	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.31	116	2.00	1.00	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	7.03	117	6.00	1.01	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>48.0</b>	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
<b>DRO &gt;C10-C28*</b>	<b>108</b>	10.0	08/27/2024	ND	188	94.1	200	6.39	
<b>EXT DRO &gt;C28-C36</b>	<b>32.7</b>	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 99.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 07 0-4 (H245180-09)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.25	112	2.00	1.92	
Toluene*	<0.050	0.050	08/27/2024	ND	2.31	115	2.00	1.63	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.31	116	2.00	1.00	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	7.03	117	6.00	1.01	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 95.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 07 4-7 (H245180-10)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.057</b>	0.050	08/27/2024	ND	2.25	112	2.00	1.92	
Toluene*	<0.050	0.050	08/27/2024	ND	2.31	115	2.00	1.63	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.31	116	2.00	1.00	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	7.03	117	6.00	1.01	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>144</b>	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 94.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 09 0-4 (H245180-11)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.25	112	2.00	1.92	
Toluene*	<0.050	0.050	08/27/2024	ND	2.31	115	2.00	1.63	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.31	116	2.00	1.00	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	7.03	117	6.00	1.01	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 98.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 09 4-7 (H245180-12)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.25	112	2.00	1.92	
Toluene*	<0.050	0.050	08/27/2024	ND	2.31	115	2.00	1.63	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.31	116	2.00	1.00	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	7.03	117	6.00	1.01	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
<b>DRO &gt;C10-C28*</b>	<b>20.4</b>	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 94.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 10 0-4 (H245180-13)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.25	112	2.00	1.92	
Toluene*	<0.050	0.050	08/27/2024	ND	2.31	115	2.00	1.63	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.31	116	2.00	1.00	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	7.03	117	6.00	1.01	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 86.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 10 4-6 (H245180-14)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.25	112	2.00	1.92	
Toluene*	<0.050	0.050	08/27/2024	ND	2.31	115	2.00	1.63	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.31	116	2.00	1.00	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	7.03	117	6.00	1.01	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>112</b>	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
<b>DRO &gt;C10-C28*</b>	<b>581</b>	10.0	08/27/2024	ND	188	94.1	200	6.39	
<b>EXT DRO &gt;C28-C36</b>	<b>152</b>	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 92.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 01 0-4 (H245180-15)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.25	112	2.00	1.92	
Toluene*	<0.050	0.050	08/27/2024	ND	2.31	115	2.00	1.63	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.31	116	2.00	1.00	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	7.03	117	6.00	1.01	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/28/2024	ND	432	108	400	3.64	

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	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 87.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/26/2024	Sampling Date:	08/26/2024
Reported:	08/30/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 01 4-7 (H245180-16)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/27/2024	ND	2.25	112	2.00	1.92	
Toluene*	<0.050	0.050	08/27/2024	ND	2.31	115	2.00	1.63	
Ethylbenzene*	<0.050	0.050	08/27/2024	ND	2.31	116	2.00	1.00	
Total Xylenes*	<0.150	0.150	08/27/2024	ND	7.03	117	6.00	1.01	
Total BTEX	<0.300	0.300	08/27/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/27/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/27/2024	ND	198	99.2	200	6.50	
DRO >C10-C28*	<10.0	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	<10.0	10.0	08/27/2024	ND					

Surrogate: 1-Chlorooctane 81.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*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

ANALYSIS REQUEST

Company Name: Ensolum, LLC		P.O. #:		BILL TO								
Project Manager: Aimee Cole		Company: Ensolum, LLC										
Address: 3122 National Parks Hwy		Attn: Aimee Cole										
City: Carlsbad		Address:										
Phone #: (720) 384-7365		City:										
Project #: 03E205710 2		State: NM										
Project Name: MCA 15-1		Project Owner:										
Project Location: 32,808, -103.7725-		State:										
Sampler Name: Mario Sorkis		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	TPH	Chlorides
H24580	F508	7	C	1	SOIL	✓		8/26/2004	1007	✓	✓	✓
	F509	7	C	1	SOIL				1010	✓	✓	✓
	F510	6	C	1	SOIL				1014	✓	✓	✓
	F511	7	C	1	SOIL				1016	✓	✓	✓
	F515	7	C	1	SOIL				1018	✓	✓	✓
	F516	6	C	1	SOIL				1031	✓	✓	✓
	F517	6	C	1	SOIL				1206	✓	✓	✓
	SW06	0-4	C	1	SOIL				1207	✓	✓	✓
	SW07	0-4	C	1	SOIL				1209	✓	✓	✓
	SW07	4-7	C	1	SOIL					✓	✓	✓

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Relinquished By: \_\_\_\_\_  
 Date: 8/26/20  
 Time: 1539  
 Received By: *Shoddeignwey*  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Delivered By: (Circle One)  Observed Temp. °C: 3.7°C  Corrected Temp. °C: 3.1°C  
 Sampler - UPS - Bus - Other: \_\_\_\_\_  
 Sample Condition:  Cool  Intact  Yes  No  
 CHECKED BY: *SR*  
 Turnaround Time: \_\_\_\_\_ Standard  Rush   
 Thermometer ID: #113 *B.U.C.*  
 Correction Factor: -0.5°C  
 Bacteria (only)  Cool  Intact  Yes  No  
 Sample Condition:  Observed Temp. °C: \_\_\_\_\_  
 Corrected Temp. °C: \_\_\_\_\_

REMARKS: *able@ensolum.com/mario.sorkis@ensolum.com*  
 Verbal Result:  Yes  No Add'l Phone #: \_\_\_\_\_  
 All Results are emailed. Please provide Email address: \_\_\_\_\_





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

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September 04, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 08/28/24 14:16.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/28/2024	Sampling Date:	08/28/2024
Reported:	09/04/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: FS19 4 (H245239-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/30/2024	ND	2.20	110	2.00	3.92	
Toluene*	<0.050	0.050	08/30/2024	ND	2.02	101	2.00	5.67	
Ethylbenzene*	<0.050	0.050	08/30/2024	ND	2.09	104	2.00	4.82	
Total Xylenes*	<0.150	0.150	08/30/2024	ND	6.41	107	6.00	4.23	
Total BTEX	<0.300	0.300	08/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3840	16.0	08/30/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2024	ND	219	109	200	1.09	
DRO >C10-C28*	<10.0	10.0	08/29/2024	ND	223	112	200	1.52	
EXT DRO >C28-C36	<10.0	10.0	08/29/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/28/2024	Sampling Date:	08/28/2024
Reported:	09/04/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SW11 0-4 (H245239-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/30/2024	ND	2.20	110	2.00	3.92	
Toluene*	<0.050	0.050	08/30/2024	ND	2.02	101	2.00	5.67	
Ethylbenzene*	<0.050	0.050	08/30/2024	ND	2.09	104	2.00	4.82	
Total Xylenes*	<0.150	0.150	08/30/2024	ND	6.41	107	6.00	4.23	
Total BTEX	<0.300	0.300	08/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/30/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2024	ND	219	109	200	1.09	
DRO >C10-C28*	<10.0	10.0	08/29/2024	ND	223	112	200	1.52	
EXT DRO >C28-C36	<10.0	10.0	08/29/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/28/2024	Sampling Date:	08/28/2024
Reported:	09/04/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SW12 0-4 (H245239-03)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/30/2024	ND	2.20	110	2.00	3.92		
Toluene*	<0.050	0.050	08/30/2024	ND	2.02	101	2.00	5.67		
Ethylbenzene*	<0.050	0.050	08/30/2024	ND	2.09	104	2.00	4.82		
Total Xylenes*	<0.150	0.150	08/30/2024	ND	6.41	107	6.00	4.23		
Total BTEX	<0.300	0.300	08/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/30/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/29/2024	ND	219	109	200	1.09		
DRO >C10-C28*	<10.0	10.0	08/29/2024	ND	223	112	200	1.52		
EXT DRO >C28-C36	<10.0	10.0	08/29/2024	ND						

Surrogate: 1-Chlorooctane 107 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/28/2024	Sampling Date:	08/28/2024
Reported:	09/04/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SW13 0-4 (H245239-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/30/2024	ND	2.20	110	2.00	3.92	
Toluene*	<0.050	0.050	08/30/2024	ND	2.02	101	2.00	5.67	
Ethylbenzene*	<0.050	0.050	08/30/2024	ND	2.09	104	2.00	4.82	
Total Xylenes*	<0.150	0.150	08/30/2024	ND	6.41	107	6.00	4.23	
Total BTEX	<0.300	0.300	08/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/30/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2024	ND	219	109	200	1.09	
DRO >C10-C28*	<10.0	10.0	08/29/2024	ND	223	112	200	1.52	
EXT DRO >C28-C36	<10.0	10.0	08/29/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/28/2024	Sampling Date:	08/28/2024
Reported:	09/04/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: FS22 6.5 (H245239-05)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/30/2024	ND	2.20	110	2.00	3.92	
Toluene*	<0.050	0.050	08/30/2024	ND	2.02	101	2.00	5.67	
Ethylbenzene*	<0.050	0.050	08/30/2024	ND	2.09	104	2.00	4.82	
Total Xylenes*	<0.150	0.150	08/30/2024	ND	6.41	107	6.00	4.23	
Total BTEX	<0.300	0.300	08/30/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9000	16.0	08/30/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/29/2024	ND	219	109	200	1.09	
DRO >C10-C28*	<10.0	10.0	08/29/2024	ND	223	112	200	1.52	
EXT DRO >C28-C36	<10.0	10.0	08/29/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/28/2024	Sampling Date:	08/28/2024
Reported:	09/04/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: FS23 7 (H245239-06)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/30/2024	ND	2.20	110	2.00	3.92		
Toluene*	<0.050	0.050	08/30/2024	ND	2.02	101	2.00	5.67		
Ethylbenzene*	<0.050	0.050	08/30/2024	ND	2.09	104	2.00	4.82		
Total Xylenes*	<0.150	0.150	08/30/2024	ND	6.41	107	6.00	4.23		
Total BTEX	<0.300	0.300	08/30/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1170	16.0	08/30/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/29/2024	ND	219	109	200	1.09		
DRO >C10-C28*	<10.0	10.0	08/29/2024	ND	223	112	200	1.52		
EXT DRO >C28-C36	<10.0	10.0	08/29/2024	ND						

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/28/2024	Sampling Date:	08/28/2024
Reported:	09/04/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SW14 0-5 (H245239-07)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/30/2024	ND	2.00	100	2.00	2.01		
Toluene*	<0.050	0.050	08/30/2024	ND	1.92	96.0	2.00	2.09		
Ethylbenzene*	<0.050	0.050	08/30/2024	ND	1.91	95.6	2.00	1.68		
Total Xylenes*	<0.150	0.150	08/30/2024	ND	5.72	95.3	6.00	0.993		
Total BTEX	<0.300	0.300	08/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/30/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/29/2024	ND	219	109	200	1.09		
DRO >C10-C28*	<10.0	10.0	08/29/2024	ND	223	112	200	1.52		
EXT DRO >C28-C36	<10.0	10.0	08/29/2024	ND						

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/28/2024	Sampling Date:	08/28/2024
Reported:	09/04/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SW15 0-5 (H245239-08)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/30/2024	ND	2.00	100	2.00	2.01		
Toluene*	<0.050	0.050	08/30/2024	ND	1.92	96.0	2.00	2.09		
Ethylbenzene*	<0.050	0.050	08/30/2024	ND	1.91	95.6	2.00	1.68		
Total Xylenes*	<0.150	0.150	08/30/2024	ND	5.72	95.3	6.00	0.993		
Total BTEX	<0.300	0.300	08/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/30/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/29/2024	ND	219	109	200	1.09		
DRO >C10-C28*	<10.0	10.0	08/29/2024	ND	223	112	200	1.52		
EXT DRO >C28-C36	<10.0	10.0	08/29/2024	ND						

Surrogate: 1-Chlorooctane 109 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	08/28/2024	Sampling Date:	08/28/2024
Reported:	09/04/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SW17 0-6 (H245239-09)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/30/2024	ND	2.00	100	2.00	2.01		
Toluene*	<0.050	0.050	08/30/2024	ND	1.92	96.0	2.00	2.09		
Ethylbenzene*	<0.050	0.050	08/30/2024	ND	1.91	95.6	2.00	1.68		
Total Xylenes*	<0.150	0.150	08/30/2024	ND	5.72	95.3	6.00	0.993		
Total BTEX	<0.300	0.300	08/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	08/30/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/29/2024	ND	219	109	200	1.09		
DRO >C10-C28*	<10.0	10.0	08/29/2024	ND	223	112	200	1.52		
EXT DRO >C28-C36	<10.0	10.0	08/29/2024	ND						

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

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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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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager





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September 18, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 08/29/24 11:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

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

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

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

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 18-Sep-24 10:27
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 24 3'	H245272-01	Soil	29-Aug-24 09:26	29-Aug-24 11:30
FS 25 3'	H245272-02	Soil	29-Aug-24 09:31	29-Aug-24 11:30
SW 19 0-3'	H245272-03	Soil	29-Aug-24 09:33	29-Aug-24 11:30

09/18/24 - Client changed the sample ID on -03 (see COC). This is the revised report and will replace the one sent on 09/04/24.

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 18-Sep-24 10:27
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**FS 24 3'**  
**H245272-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>240</b>		16.0	mg/kg	4	4083010	CT	30-Aug-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4083004	JH	30-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4083004	JH	30-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4083004	JH	30-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4083004	JH	30-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4083004	JH	30-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			121 %		71.5-134	4083004	JH	30-Aug-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082912	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082912	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082912	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			80.0 %		48.2-134	4082912	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			83.5 %		49.1-148	4082912	MS	29-Aug-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 18-Sep-24 10:27
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**FS 25 3'  
H245272-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>144</b>		16.0	mg/kg	4	4083010	CT	30-Aug-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4083004	JH	31-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4083004	JH	31-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4083004	JH	31-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4083004	JH	31-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4083004	JH	31-Aug-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			116 %	71.5-134		4083004	JH	31-Aug-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082912	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082912	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082912	MS	29-Aug-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			74.3 %	48.2-134		4082912	MS	29-Aug-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			78.0 %	49.1-148		4082912	MS	29-Aug-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 18-Sep-24 10:27
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**SW 19 0-3'  
H245272-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

Chloride	32.0		16.0	mg/kg	4	4083010	CT	30-Aug-24	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4083004	JH	31-Aug-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4083004	JH	31-Aug-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4083004	JH	31-Aug-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4083004	JH	31-Aug-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4083004	JH	31-Aug-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			120 %	71.5-134		4083004	JH	31-Aug-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4082912	MS	29-Aug-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4082912	MS	29-Aug-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4082912	MS	29-Aug-24	8015B	

Surrogate: 1-Chlorooctane			81.0 %	48.2-134		4082912	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			83.8 %	49.1-148		4082912	MS	29-Aug-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 18-Sep-24 10:27
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**Inorganic Compounds - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4083010 - 1:4 DI Water</b>										
<b>Blank (4083010-BLK1)</b>										
Prepared & Analyzed: 30-Aug-24										
Chloride	ND	16.0	mg/kg							
<b>LCS (4083010-BS1)</b>										
Prepared & Analyzed: 30-Aug-24										
Chloride	416	16.0	mg/kg	400		104	80-120			
<b>LCS Dup (4083010-BSD1)</b>										
Prepared & Analyzed: 30-Aug-24										
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 18-Sep-24 10:27
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**Volatile Organic Compounds by EPA Method 8021 - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4083004 - Volatiles**

**Blank (4083004-BLK1)**

Prepared & Analyzed: 30-Aug-24

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0587		mg/kg	0.0500		117	71.5-134			

**LCS (4083004-BS1)**

Prepared & Analyzed: 30-Aug-24

Benzene	2.11	0.050	mg/kg	2.00		106	82.8-130			
Toluene	2.21	0.050	mg/kg	2.00		110	86-128			
Ethylbenzene	2.42	0.050	mg/kg	2.00		121	85.9-128			
m,p-Xylene	4.70	0.100	mg/kg	4.00		118	89-129			
o-Xylene	2.30	0.050	mg/kg	2.00		115	86.1-125			
Total Xylenes	7.01	0.150	mg/kg	6.00		117	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0570		mg/kg	0.0500		114	71.5-134			

**LCS Dup (4083004-BSD1)**

Prepared & Analyzed: 30-Aug-24

Benzene	2.14	0.050	mg/kg	2.00		107	82.8-130	1.40	15.8	
Toluene	2.25	0.050	mg/kg	2.00		113	86-128	2.03	15.9	
Ethylbenzene	2.45	0.050	mg/kg	2.00		122	85.9-128	1.15	16	
m,p-Xylene	4.72	0.100	mg/kg	4.00		118	89-129	0.414	16.2	
o-Xylene	2.31	0.050	mg/kg	2.00		116	86.1-125	0.432	16.7	
Total Xylenes	7.04	0.150	mg/kg	6.00		117	88.2-128	0.420	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0557		mg/kg	0.0500		111	71.5-134			

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 18-Sep-24 10:27
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**Petroleum Hydrocarbons by GC FID - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4082912 - General Prep - Organics**

<b>Blank (4082912-BLK1)</b>				Prepared & Analyzed: 29-Aug-24						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	37.1		mg/kg	50.0		74.2	48.2-134			
Surrogate: 1-Chlorooctadecane	39.0		mg/kg	50.0		77.9	49.1-148			

<b>LCS (4082912-BS1)</b>				Prepared & Analyzed: 29-Aug-24						
GRO C6-C10	204	10.0	mg/kg	200		102	66.4-123			
DRO >C10-C28	195	10.0	mg/kg	200		97.7	66.5-118			
Total TPH C6-C28	399	10.0	mg/kg	400		99.8	77.6-123			
Surrogate: 1-Chlorooctane	40.9		mg/kg	50.0		81.9	48.2-134			
Surrogate: 1-Chlorooctadecane	42.1		mg/kg	50.0		84.1	49.1-148			

<b>LCS Dup (4082912-BSD1)</b>				Prepared & Analyzed: 29-Aug-24						
GRO C6-C10	207	10.0	mg/kg	200		104	66.4-123	1.54	17.7	
DRO >C10-C28	196	10.0	mg/kg	200		98.0	66.5-118	0.326	21	
Total TPH C6-C28	403	10.0	mg/kg	400		101	77.6-123	0.950	18.5	
Surrogate: 1-Chlorooctane	40.7		mg/kg	50.0		81.4	48.2-134			
Surrogate: 1-Chlorooctadecane	41.0		mg/kg	50.0		82.0	49.1-148			

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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

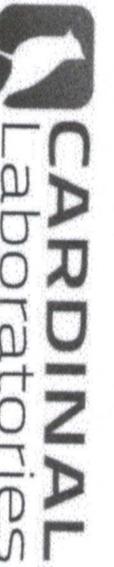
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*Celey D. Keene*

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: Aimee Cole Address: 3122 National Parks Hwy City: Carlsbad State: NM Zip: 88220 Phone #: (720) 384-7365 Fax #: _____ Project #: 03E2057100 Project Owner: _____ Project Name: MCA 151 Project Location: 32, 808, -103.7725 Sampler Name: MAND SARKIS FOR LAB USE ONLY		P.O. #: _____ Company: ENSULUM, LLC Attn: AIMEE COLE Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____	
Lab I.D. H24522 Sample I.D. 1 F524 2 F525 3 SW189*		Depth (feet) 3 3 0-3	
(G)RAB OR (C)OMP. ( ) # CONTAINERS ( ) MATRIX GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: _____ ACID/BASE: _____ ICE / COOL OTHER: _____		PRESERV. <input checked="" type="checkbox"/> SAMPLING	
DATE 8/24/24 TIME 0926 0931 0933		ANALYSIS REQUEST BTEX TPH Chlorides	
PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder for Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.			
Relinquished By: _____ Date: 8/24/24 Time: 11:30		Received By: _____ Date: _____ Time: _____	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____ Observed Temp. °C 65 Corrected Temp. °C 5.9		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Bacteria (only) <input type="checkbox"/> Yes <input type="checkbox"/> No Checked By: (Initials) J.E. Turnaround Time: #140 Standard Rush 72 hr Thermometer ID #4435 Correction Factor: 0.00	
Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: _____ All Results are emailed. Please provide Email address: _____ REMARKS: A COLE@ENSULUM.COM / MSARKIS@ENSULUM.COM *Customer requested ID changes.			



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

September 10, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/05/24 14:37.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

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

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

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

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS 12 6	H245390-01	Soil	05-Sep-24 10:25	05-Sep-24 14:37
FS 30 6	H245390-02	Soil	05-Sep-24 10:26	05-Sep-24 14:37
FS 31 6	H245390-03	Soil	05-Sep-24 10:29	05-Sep-24 14:37
FS 32 5	H245390-04	Soil	05-Sep-24 10:35	05-Sep-24 14:37
FS 33 6	H245390-05	Soil	05-Sep-24 10:36	05-Sep-24 14:37
FS 26 6	H245390-06	Soil	05-Sep-24 10:38	05-Sep-24 14:37
FS 27 6	H245390-07	Soil	05-Sep-24 10:40	05-Sep-24 14:37
FS 28 5	H245390-08	Soil	05-Sep-24 10:41	05-Sep-24 14:37
FS 29 6	H245390-09	Soil	05-Sep-24 10:43	05-Sep-24 14:37
SW 16 0-6	H245390-10	Soil	05-Sep-24 10:54	05-Sep-24 14:37
SW 06 0-4	H245390-11	Soil	04-Sep-24 14:21	05-Sep-24 14:37

09/10/24 - The wrong depth was logged in for samples -04 and -08. This is the revised report and will replace the one sent earlier today, 09/10/24.

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**FS 12 6  
H245390-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>528</b>		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090537	JH	06-Sep-24	8021B	
Toluene*	<b>0.179</b>		0.050	mg/kg	50	4090537	JH	06-Sep-24	8021B	GC-NC1
Ethylbenzene*	<b>1.25</b>		0.050	mg/kg	50	4090537	JH	06-Sep-24	8021B	GC-NC1
Total Xylenes*	<b>3.13</b>		0.150	mg/kg	50	4090537	JH	06-Sep-24	8021B	GC-NC1
Total BTEX	<b>4.56</b>		0.300	mg/kg	50	4090537	JH	06-Sep-24	8021B	GC-NC1

Surrogate: 4-Bromofluorobenzene (PID)			121 %	71.5-134		4090537	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<b>121</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	<b>1390</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<b>242</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			109 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			115 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**FS 30 6  
H245390-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>864</b>		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<b>0.263</b>		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	GC-NC1, QM-07
<b>Total Xylenes*</b>	<b>0.731</b>		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	GC-NC1
<b>Total BTEX</b>	<b>0.994</b>		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	GC-NC1
Surrogate: 4-Bromofluorobenzene (PID)			119 %	71.5-134		4090607	JH	06-Sep-24	8021B	

**Petroleum Hydrocarbons by GC FID**

<b>GRO C6-C10*</b>	<b>34.7</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
<b>DRO &gt;C10-C28*</b>	<b>522</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>75.2</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
Surrogate: 1-Chlorooctane			101 %	48.2-134		4090608	MS	06-Sep-24	8015B	
Surrogate: 1-Chlorooctadecane			119 %	49.1-148		4090608	MS	06-Sep-24	8015B	

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**FS 31 6  
H245390-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

Chloride	5600		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			99.9 %	71.5-134		4090607	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			107 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			126 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**FS 32 5  
H245390-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>272</b>		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			99.9 %	71.5-134		4090607	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	<b>178</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<b>40.7</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			107 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			131 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**FS 33 6  
H245390-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>240</b>		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			101 %	71.5-134		4090607	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
<b>DRO &gt;C10-C28*</b>	<b>21.7</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

<i>Surrogate: 1-Chlorooctane</i>			97.6 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			116 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**FS 26 6  
H245390-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>208</b>		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			102 %	71.5-134		4090607	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	<b>97.0</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<b>31.0</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			99.1 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			127 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**FS 27 6  
H245390-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

Chloride	240		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			102 %	71.5-134		4090607	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			99.3 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			117 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**FS 28 5  
H245390-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>144</b>		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			106 %	71.5-134		4090607	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
<b>DRO &gt;C10-C28*</b>	<b>568</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>176</b>		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			103 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			131 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**FS 29 6  
H245390-09 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

Chloride	16.0		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			101 %	71.5-134		4090607	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			100 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			120 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**SW 16 0-6  
H245390-10 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

Chloride	16.0		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			103 %	71.5-134		4090607	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			101 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			120 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**SW 06 0-4  
H245390-11 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

Chloride	16.0		16.0	mg/kg	4	4090626	CT	09-Sep-24	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4090607	JH	06-Sep-24	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			101 %	71.5-134		4090607	JH	06-Sep-24	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane			98.9 %	48.2-134		4090608	MS	06-Sep-24	8015B	
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Surrogate: 1-Chlorooctadecane			116 %	49.1-148		4090608	MS	06-Sep-24	8015B	
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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**Inorganic Compounds - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4090626 - 1:4 DI Water</b>										
<b>Blank (4090626-BLK1)</b>										
				Prepared: 06-Sep-24 Analyzed: 09-Sep-24						
Chloride	ND	16.0	mg/kg							
<b>LCS (4090626-BS1)</b>										
				Prepared: 06-Sep-24 Analyzed: 09-Sep-24						
Chloride	400	16.0	mg/kg	400		100	80-120			
<b>LCS Dup (4090626-BSD1)</b>										
				Prepared: 06-Sep-24 Analyzed: 09-Sep-24						
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

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**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**Volatile Organic Compounds by EPA Method 8021 - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4090537 - Volatiles**

<b>Blank (4090537-BLK1)</b>		Prepared: 05-Sep-24 Analyzed: 06-Sep-24								
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>ND</i>		<i>mg/kg</i>	<i>0.0500</i>		<i>95.3</i>	<i>71.5-134</i>			

<b>LCS (4090537-BS1)</b>		Prepared: 05-Sep-24 Analyzed: 06-Sep-24								
Benzene	1.50	0.050	mg/kg	2.00		75.2	82.8-130			BS-3
Toluene	1.42	0.050	mg/kg	2.00		70.9	86-128			BS-3
Ethylbenzene	1.46	0.050	mg/kg	2.00		72.8	85.9-128			BS-3
m,p-Xylene	2.89	0.100	mg/kg	4.00		72.3	89-129			BS-3
o-Xylene	1.42	0.050	mg/kg	2.00		70.8	86.1-125			BS-3
Total Xylenes	4.31	0.150	mg/kg	6.00		71.8	88.2-128			BS-3
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0471</i>		<i>mg/kg</i>	<i>0.0500</i>		<i>94.2</i>	<i>71.5-134</i>			

<b>LCS Dup (4090537-BSD1)</b>		Prepared: 05-Sep-24 Analyzed: 06-Sep-24								
Benzene	1.85	0.050	mg/kg	2.00		92.4	82.8-130	20.5	15.8	QR-04
Toluene	1.73	0.050	mg/kg	2.00		86.7	86-128	20.0	15.9	QR-04
Ethylbenzene	1.78	0.050	mg/kg	2.00		88.8	85.9-128	19.9	16	QR-04
m,p-Xylene	3.53	0.100	mg/kg	4.00		88.3	89-129	19.9	16.2	BS-3, QR-04
o-Xylene	1.72	0.050	mg/kg	2.00		86.1	86.1-125	19.5	16.7	QR-04
Total Xylenes	5.25	0.150	mg/kg	6.00		87.5	88.2-128	19.8	16.3	BS-3, QR-04
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.0471</i>		<i>mg/kg</i>	<i>0.0500</i>		<i>94.1</i>	<i>71.5-134</i>			

**Batch 4090607 - Volatiles**

<b>Blank (4090607-BLK1)</b>		Prepared & Analyzed: 06-Sep-24								
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							

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\*=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 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**Volatile Organic Compounds by EPA Method 8021 - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4090607 - Volatiles**

**Blank (4090607-BLK1)**

Prepared & Analyzed: 06-Sep-24

Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		99.8	71.5-134			

**LCS (4090607-BS1)**

Prepared & Analyzed: 06-Sep-24

Benzene	1.67	0.050	mg/kg	2.00		83.3	82.8-130			
Toluene	1.68	0.050	mg/kg	2.00		84.0	86-128			BS-3
Ethylbenzene	1.66	0.050	mg/kg	2.00		82.9	85.9-128			BS-3
m,p-Xylene	3.57	0.100	mg/kg	4.00		89.2	89-129			
o-Xylene	1.66	0.050	mg/kg	2.00		83.1	86.1-125			BS-3
Total Xylenes	5.23	0.150	mg/kg	6.00		87.1	88.2-128			BS-3
Surrogate: 4-Bromofluorobenzene (PID)	0.0495		mg/kg	0.0500		99.0	71.5-134			

**LCS Dup (4090607-BSD1)**

Prepared & Analyzed: 06-Sep-24

Benzene	1.86	0.050	mg/kg	2.00		93.0	82.8-130	10.9	15.8	
Toluene	1.87	0.050	mg/kg	2.00		93.6	86-128	10.8	15.9	
Ethylbenzene	1.84	0.050	mg/kg	2.00		92.2	85.9-128	10.7	16	
m,p-Xylene	3.94	0.100	mg/kg	4.00		98.5	89-129	9.92	16.2	
o-Xylene	1.84	0.050	mg/kg	2.00		92.0	86.1-125	10.2	16.7	
Total Xylenes	5.78	0.150	mg/kg	6.00		96.3	88.2-128	10.0	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0490		mg/kg	0.0500		98.1	71.5-134			

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM 3122 NATIONAL PARKS HWY CARLSBAD NM, 88220	Project: MCA 151 FLOWLINE RELEASE Project Number: 03E2057102 Project Manager: AIMEE COLE Fax To:	Reported: 10-Sep-24 16:00
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**Petroleum Hydrocarbons by GC FID - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4090608 - General Prep - Organics**

<b>Blank (4090608-BLK1)</b>		Prepared & Analyzed: 06-Sep-24								
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	46.4		mg/kg	50.0		92.8	48.2-134			
Surrogate: 1-Chlorooctadecane	48.1		mg/kg	50.0		96.1	49.1-148			

<b>LCS (4090608-BS1)</b>		Prepared & Analyzed: 06-Sep-24								
GRO C6-C10	196	10.0	mg/kg	200		98.1	66.4-123			
DRO >C10-C28	191	10.0	mg/kg	200		95.4	66.5-118			
Total TPH C6-C28	387	10.0	mg/kg	400		96.7	77.6-123			
Surrogate: 1-Chlorooctane	52.0		mg/kg	50.0		104	48.2-134			
Surrogate: 1-Chlorooctadecane	53.0		mg/kg	50.0		106	49.1-148			

<b>LCS Dup (4090608-BSD1)</b>		Prepared & Analyzed: 06-Sep-24								
GRO C6-C10	191	10.0	mg/kg	200		95.5	66.4-123	2.65	17.7	
DRO >C10-C28	190	10.0	mg/kg	200		94.9	66.5-118	0.531	21	
Total TPH C6-C28	381	10.0	mg/kg	400		95.2	77.6-123	1.60	18.5	
Surrogate: 1-Chlorooctane	50.6		mg/kg	50.0		101	48.2-134			
Surrogate: 1-Chlorooctadecane	51.6		mg/kg	50.0		103	49.1-148			

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Notes and Definitions

- QR-04 The RPD for the BS/BSD was outside of historical limits.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
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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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

pg. 1

ANALYSIS REQUEST

Company Name: Ensolum, LLC  
 Project Manager: Aimee Cole  
 Address: 3122 National Parks Hwy  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: (720) 384-7365 Fax #:   
 Project #: 03E2057102 Project Owner:   
 Project Name: MCA 151  
 Project Location: 32.808, -103.7225  
 Sampler Name: Mario Sarmis

P.O. #:   
 Company: Ensolum, LLC  
 Attn: Aimee Cole  
 Address:   
 City:   
 State: Zip:   
 Phone #:   
 Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
HA45370	FS12	6	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9/5/24	1025	BTEX				
	FS30	6	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1026	TPH				
	FS31	6	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1029	Chlorides				
	FS24 FS32	5	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1035					
	FS25 FS33	6	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1036					
	FS26	6	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1038					
	FS27	6	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1040					
	FS28	5	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1041					
	FS29	6	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1043					
	SW16	0-6	C	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1054					

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Relinquished By: *[Signature]* Date: 9/5/24 Received By: *[Signature]*  
 Relinquished By: *[Signature]* Date: 9/5/24 Received By: *[Signature]*

Delivered By: (Circle One) Observed Temp. °C: 1.82 Sample Condition:  Intact  Cool  Yes  No  
 Sampler - UPS - Bus - Other: Corrected Temp. °C: 1.82 Checked By: *[Signature]*

Turnaround Time: Standard  Rush  Bacteria (only)  Cool  Intact  Yes  No  
 Thermometer ID: #443 Corrected Factor: 0.5°C

REMARKS: \*Customer requested ID changes. to 9/6/24

FOR LAB USE ONLY

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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

**BAW TO**

ANALYSIS REQUEST

Company Name: Ensolum, LLC		P.O. #:		ANALYSIS REQUEST																							
Project Manager: Aimee Cole		Company: ENSOLUM, LLC																									
Address: 3122 National Parks Hwy		Attn: Aimee Cole																									
City: Carlsbad		Address:																									
State: NM		City:																									
Zip: 88220		State:																									
Phone #: (720) 384-7365		Fax #:																									
Project #: 03E2057102		Project Owner:																									
Project Name: MCA 151		City:																									
Project Location: 32,808, -103, 7725		State:																									
Sampler Name: MARIO SARKIS		Phone #:																									
FOR LAB USE ONLY		Fax #:																									
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	DATE	TIME	BTEX	TPH	Chlorides																		
H245390	SW06	0-4	✓	1	9/21/21	1421	✓	✓	✓																		
<p><b>MATRIX</b></p> <table border="1"> <tr><td>GROUNDWATER</td><td></td></tr> <tr><td>WASTEWATER</td><td></td></tr> <tr><td>SOIL</td><td>✓</td></tr> <tr><td>OIL</td><td></td></tr> <tr><td>SLUDGE</td><td></td></tr> <tr><td>OTHER:</td><td></td></tr> </table> <p><b>PRESERV</b></p> <table border="1"> <tr><td>ACID/BASE:</td><td></td></tr> <tr><td>ICE / COOL</td><td>✓</td></tr> <tr><td>OTHER:</td><td></td></tr> </table>										GROUNDWATER		WASTEWATER		SOIL	✓	OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL	✓	OTHER:	
GROUNDWATER																											
WASTEWATER																											
SOIL	✓																										
OIL																											
SLUDGE																											
OTHER:																											
ACID/BASE:																											
ICE / COOL	✓																										
OTHER:																											
<p><b>SAMPLING</b></p> <p>DATE: 9/21/21</p> <p>TIME: 1421</p>																											
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Relinquished By: <i>[Signature]</i>		Date: 9/5/24		Received By: <i>[Signature]</i>		Date: 9/5/24		Time: 1437																			
Delivered By: (Circle One)		Observed Temp. °C: 18.2		Sample Condition		CHECKED BY: <i>[Signature]</i>		Turnaround Time: 24-48 hrs																			
Sampler - UPS - Bus - Other:		Corrected Temp. °C: 1.2		Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Initials: <i>[Signature]</i>		Standard <input type="checkbox"/> Rush <input checked="" type="checkbox"/>																			
				Bacteria (only) <input type="checkbox"/> Yes <input type="checkbox"/> No		Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Sample Condition <input type="checkbox"/> Yes <input type="checkbox"/> No																			
				Corrected Temp. °C		Observed Temp. °C		Corrected Temp. °C																			
<p>REMARKS: Aimee@ensolum.com / msarkis@ensolum.com</p>																											
<p>Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:</p> <p>All Results are emailed. Please provide Email address:</p>																											

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pg. 2



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September 11, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/09/24 15:39.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/09/2024	Sampling Date:	09/09/2024
Reported:	09/11/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: FS 18 6.5 (H245439-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2024	ND	1.79	89.4	2.00	3.56	
<b>Toluene*</b>	<b>0.089</b>	0.050	09/10/2024	ND	1.74	87.1	2.00	3.46	
Ethylbenzene*	<0.050	0.050	09/10/2024	ND	1.77	88.3	2.00	4.01	
Total Xylenes*	<0.150	0.150	09/10/2024	ND	5.28	88.0	6.00	4.37	
Total BTEX	<0.300	0.300	09/10/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1040</b>	16.0	09/10/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2024	ND	198	98.9	200	2.48	
DRO >C10-C28*	<10.0	10.0	09/10/2024	ND	178	88.8	200	12.9	
EXT DRO >C28-C36	<10.0	10.0	09/10/2024	ND					

Surrogate: 1-Chlorooctane 94.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/09/2024	Sampling Date:	09/09/2024
Reported:	09/11/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: FS 20 9 (H245439-02)**

BTEX 8021B		mg/kg		Analyzed By: JH				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Benzene*</b>	<b>1.29</b>	0.500	09/10/2024	ND	1.79	89.4	2.00	3.56	GC-NC1	
<b>Toluene*</b>	<b>19.6</b>	0.500	09/10/2024	ND	1.74	87.1	2.00	3.46		
<b>Ethylbenzene*</b>	<b>25.8</b>	0.500	09/10/2024	ND	1.77	88.3	2.00	4.01		
<b>Total Xylenes*</b>	<b>46.5</b>	1.50	09/10/2024	ND	5.28	88.0	6.00	4.37		
<b>Total BTEX</b>	<b>93.3</b>	3.00	09/10/2024	ND					GC-NC1	

Surrogate: 4-Bromofluorobenzene (PID) 140 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>4080</b>	16.0	09/10/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10*</b>	<b>795</b>	10.0	09/10/2024	ND	198	98.9	200	2.48		
<b>DRO &gt;C10-C28*</b>	<b>2690</b>	10.0	09/10/2024	ND	178	88.8	200	12.9		
<b>EXT DRO &gt;C28-C36</b>	<b>396</b>	10.0	09/10/2024	ND						

Surrogate: 1-Chlorooctane 159 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/09/2024	Sampling Date:	09/09/2024
Reported:	09/11/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: FS 21 6.5 (H245439-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2024	ND	1.79	89.4	2.00	3.56	
Toluene*	<0.050	0.050	09/10/2024	ND	1.74	87.1	2.00	3.46	
<b>Ethylbenzene*</b>	<b>0.051</b>	0.050	09/10/2024	ND	1.77	88.3	2.00	4.01	
Total Xylenes*	<0.150	0.150	09/10/2024	ND	5.28	88.0	6.00	4.37	
Total BTEX	<0.300	0.300	09/10/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2600</b>	16.0	09/10/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2024	ND	198	98.9	200	2.48	
DRO >C10-C28*	<10.0	10.0	09/10/2024	ND	178	88.8	200	12.9	
EXT DRO >C28-C36	<10.0	10.0	09/10/2024	ND					

Surrogate: 1-Chlorooctane 93.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/09/2024	Sampling Date:	09/09/2024
Reported:	09/11/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SW 12 4-6.5 (H245439-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2024	ND	1.79	89.4	2.00	3.56	
Toluene*	<0.050	0.050	09/10/2024	ND	1.74	87.1	2.00	3.46	
Ethylbenzene*	<0.050	0.050	09/10/2024	ND	1.77	88.3	2.00	4.01	
Total Xylenes*	<0.150	0.150	09/10/2024	ND	5.28	88.0	6.00	4.37	
Total BTEX	<0.300	0.300	09/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1470	16.0	09/10/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/10/2024	ND	198	98.9	200	2.48	
DRO >C10-C28*	<10.0	10.0	09/10/2024	ND	178	88.8	200	12.9	
EXT DRO >C28-C36	<10.0	10.0	09/10/2024	ND					

Surrogate: 1-Chlorooctane 94.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/09/2024	Sampling Date:	09/09/2024
Reported:	09/11/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SW 11 4-9 (H245439-05)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/10/2024	ND	1.79	89.4	2.00	3.56		
Toluene*	<0.050	0.050	09/10/2024	ND	1.74	87.1	2.00	3.46		
Ethylbenzene*	<0.050	0.050	09/10/2024	ND	1.77	88.3	2.00	4.01		
Total Xylenes*	<0.150	0.150	09/10/2024	ND	5.28	88.0	6.00	4.37		
Total BTEX	<0.300	0.300	09/10/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>144</b>	16.0	09/10/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/10/2024	ND	198	98.9	200	2.48		
DRO >C10-C28*	<10.0	10.0	09/10/2024	ND	178	88.8	200	12.9		
EXT DRO >C28-C36	<10.0	10.0	09/10/2024	ND						

Surrogate: 1-Chlorooctane 94.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1 8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
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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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**

**BILL TO**

ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Aimee Cole

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: (720) 384-7365

Project #: 03E205-7102

Project Name: MCA 151

Project Location: 32.808, -103.2725

Sampler Name: Mario Sarcinis

FOR LAB USE ONLY

P.O. #:   
 Company: ENSOLUM, LLC  
 Attn: Aimee Cole

Address:   
 City:   
 State:   
 Zip:

Phone #:   
 Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :			
1445431	FS18	6.5		1							9/4/24	0945	BTEX
	FS20	9		1								0950	PH
	FS21	6.5		1								0952	Chlorides
	SW12	4-6.5		1								0954	
	SW11	4-9		1								0958	

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Relinquished By: *[Signature]* Date: 9/4/24  
 Received By: *[Signature]* Date: 9/4/24  
 Remarks: a10@ensolum.com / msarcinis@ensolum.com

Turnaround Time:   
 Standard Rush     
 Thermometer ID #113-1420   
 Correction Factor 0.0   
 Sample Condition:   
 Cool Intact  Yes  No   
 Bacteria (only)  Yes  No   
 Corrected Temp. °C:   
 Observed Temp. °C: 5.0   
 Corrected Temp. °C: 5.0   
 Checked By: *[Signature]*



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

---

September 16, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/12/24 13:16.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/12/2024	Sampling Date:	09/12/2024
Reported:	09/16/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 20 9.5' (H245526-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51	
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67	
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67	
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82	
Total BTEX	<0.300	0.300	09/13/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1300	16.0	09/13/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	221	111	200	0.924	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	211	106	200	3.56	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 95.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/12/2024	Sampling Date:	09/12/2024
Reported:	09/16/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 12 7' (H245526-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	960	16.0	09/13/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	221	111	200	0.924		
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	211	106	200	3.56		
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND						

Surrogate: 1-Chlorooctane 91.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 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

- 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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\*=Accredited Analyte

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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

BILL TO

ANALYSIS REQUEST

Company Name: Ensoium, LLC  
Project Manager: Aimee Cole  
Address: 3122 National Parks Hwy  
City: Carlsbad State: NM Zip: 88220  
Phone #: (720) 384-7365 Fax #: Project Owner:  
Project #: 03E2057102 Project Name: MCA 151  
Project Location: 32,808, -103, 7785  
Sampler Name: MARCOSARIS

P.O. #: Company: ENSOIUM, LLC  
Attn: AIMEE COLE  
Address: City: State: Zip:  
Phone #: Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
H45540	PS20	9.5	C	1								9/12/24	1007	BTEX
	PS12	7	C	1								9/12/24	1609	TPH
														Chlorides

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: [Signature] Date: 9/12/24  
Received By: [Signature] Date: 9/12/24  
Time: 1310

Delivered By: (Circle One) Observed Temp. °C: 4.92 Sample Condition: Cool Intact  
Sampler - UPS - Bus - Other: Corrected Temp. °C: 4.31

Turnaround Time: 48-H Standard Rush  
Thermometer ID: #113  
Correction Factor: 0.00

Remarks: aco1@ensoium.com JM SARIS@ensoium.com

Verbal Result:  Yes  No Add'l Phone #: \_\_\_\_\_  
All Results are emailed. Please provide Email address: \_\_\_\_\_

Bacteria (only) Sample Condition: Cool Intact Observed Temp. °C: \_\_\_\_\_  
Corrected Temp. °C: \_\_\_\_\_

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



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September 16, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/12/24 13:16.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/12/2024	Sampling Date:	09/12/2024
Reported:	09/16/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 34 13' (H245527-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51	
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67	
Ethylbenzene*	<b>0.152</b>	0.050	09/13/2024	ND	2.17	108	2.00	6.67	
<b>Total Xylenes*</b>	<b>0.423</b>	0.150	09/13/2024	ND	6.73	112	6.00	4.82	
<b>Total BTEX</b>	<b>0.575</b>	0.300	09/13/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>32.0</b>	16.0	09/13/2024	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
<b>GRO C6-C10*</b>	<b>29.7</b>	10.0	09/13/2024	ND	221	111	200	0.924	
<b>DRO &gt;C10-C28*</b>	<b>1610</b>	10.0	09/13/2024	ND	211	106	200	3.56	
<b>EXT DRO &gt;C28-C36</b>	<b>402</b>	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 96.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/12/2024	Sampling Date:	09/12/2024
Reported:	09/16/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW 18 8-13' (H245527-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/13/2024	ND	2.15	108	2.00	6.51		
Toluene*	<0.050	0.050	09/13/2024	ND	2.18	109	2.00	6.67		
Ethylbenzene*	<0.050	0.050	09/13/2024	ND	2.17	108	2.00	6.67		
Total Xylenes*	<0.150	0.150	09/13/2024	ND	6.73	112	6.00	4.82		
Total BTEX	<0.300	0.300	09/13/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>32.0</b>	16.0	09/13/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	221	111	200	0.924		
<b>DRO &gt;C10-C28*</b>	<b>212</b>	10.0	09/13/2024	ND	211	106	200	3.56		
<b>EXT DRO &gt;C28-C36</b>	<b>119</b>	10.0	09/13/2024	ND						

Surrogate: 1-Chlorooctane 96.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

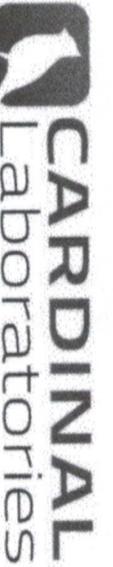
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*Celey D. Keene*

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

**BILL TO**

ANALYSIS REQUEST

Company Name: Ensolum, LLC		P.O. #:								
Project Manager: Almee Cole		Company: ENSOLUM, LLC								
Address: 3122 National Parks Hwy		Attn: Aimee Cole								
City: Carlsbad		State: NM		Zip: 88220						
Phone #: (720) 384-7365		Fax #:								
Project #: 03E2057102		Project Owner:								
Project Name: MCA 15-1		City:								
Project Location: 32,808, -103, 7725		State:		Zip:						
Sampler Name: Mario Sarika's		Phone #:		Fax #:						
FOR LAB USE ONLY										
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	ANALYSIS
HBSS27	FS34	13	C	1	SOIL	✓	DATE	4/12/24	1056	BTEX
	SW18	8-13	C	1	SOIL	✓	DATE	4/12/24	1104	TPH
					SLUDGE					Chlorides
					OTHER:					
					ACID/BASE:					
					ICE / COOL	✓				
					OTHER:					

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Relinquished By: \_\_\_\_\_  
 Date: 4/12/24  
 Received By: *Shookriqwey*  
 Date: 4/12/24

Delivered By: (Circle One) \_\_\_\_\_  
 Observed Temp. °C: 4.92  
 Corrected Temp. °C: 4.32  
 Sample Condition:  Intact  Cool  Intact  Yes  No

Turnaround Time: #400-Direct Rush 48-60  
 Thermometer ID #113  
 Corrosion Factor: 0.95  
 Standard  Bacteria (only)  Sample Condition  Observed Temp. °C  Corrected Temp. °C

REMARKS: All Results are emailed. Please provide Email address: a101e@ensolum.com / M565615@ensolum.com

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



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

---

September 17, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/12/24 13:16.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/12/2024	Sampling Date:	09/12/2024
Reported:	09/17/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW - 18 0-4' (H245532-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/14/2024	ND	2.22	111	2.00	1.39	
Toluene*	<0.050	0.050	09/14/2024	ND	2.26	113	2.00	0.628	
Ethylbenzene*	<0.050	0.050	09/14/2024	ND	2.26	113	2.00	0.0666	
Total Xylenes*	<0.150	0.150	09/14/2024	ND	6.94	116	6.00	0.263	
Total BTEX	<0.300	0.300	09/14/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	09/13/2024	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	201	100	200	1.17	
DRO >C10-C28*	<10.0	10.0	09/13/2024	ND	200	100	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/12/2024	Sampling Date:	09/12/2024
Reported:	09/17/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	** (See Notes)
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: SW - 18 4-8' (H245532-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/14/2024	ND	2.22	111	2.00	1.39	
Toluene*	<0.050	0.050	09/14/2024	ND	2.26	113	2.00	0.628	
Ethylbenzene*	<0.050	0.050	09/14/2024	ND	2.26	113	2.00	0.0666	
Total Xylenes*	<0.150	0.150	09/14/2024	ND	6.94	116	6.00	0.263	
Total BTEX	<0.300	0.300	09/14/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>48.0</b>	16.0	09/13/2024	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/13/2024	ND	201	100	200	1.17	
<b>DRO &gt;C10-C28*</b>	<b>14.4</b>	10.0	09/13/2024	ND	200	100	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 97.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*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

BILL TO

ANALYSIS REQUEST

Company Name: Ensolum, LLC  
 Project Manager: Aimee Cole  
 Address: 3122 National Parks Hwy  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: (720) 384-7365 Fax #: Project Owner:  
 Project #: 03E2057102 Project Name: MCA 151  
 Project Location: 32,808,103,7725  
 Sampler Name: MARTO SORRIS  
 P.O. #: Company: ENSOLUM, LLC  
 Attn: AIMEE COLE  
 Address: City: State: Zip:  
 Phone #: Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
1845533	SW18	0-4	C	1								9/18/24	1050	BTEX
2	SW18	4-8	C	1								9/18/24	1051	TPH
														Chlorides
MRS														

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Relinquished By: [Signature] Date: 9/18/24 Received By: [Signature] Date: 9/18/24

Delivered By: (Circle One) Observed Temp. °C: 4.9 Corrected Temp. °C: 4.3

Sampler - UPS - Bus - Other: Corrected Temp. °C: 4.3

Sample Condition: Cool Intact  Yes  No

Checked By: [Signature]

Turnaround Time: #140 Standard Rush  Bacteria (only)  Sample Condition  Cool Intact  Yes  No  Corrected Temp. °C

Remarks: ACE@ensolum.com / msorris@ensolum.com

Verbal Result:  Yes  No Add'l Phone #:

All Results are emailed. Please provide Email address:

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



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

---

September 18, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/13/24 15:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/13/2024	Sampling Date:	09/13/2024
Reported:	09/18/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: BACKFILL (H245604-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/17/2024	ND	2.13	106	2.00	0.815	
Toluene*	<0.050	0.050	09/17/2024	ND	2.02	101	2.00	0.761	
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	2.03	101	2.00	1.91	
Total Xylenes*	<0.150	0.150	09/17/2024	ND	6.10	102	6.00	2.52	
Total BTEX	<0.300	0.300	09/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/17/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/16/2024	ND	208	104	200	5.11	
DRO >C10-C28*	<10.0	10.0	09/16/2024	ND	202	101	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	09/16/2024	ND					

Surrogate: 1-Chlorooctane 91.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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*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: Aimee Cole

Address: 3122 National Parks Hwy

City: Carlsbad

State: NM Zip: 88220

Phone #: (720) 384-7365

Fax #:

Project #: DSE2057102

Project Owner:

Project Name: MA 151

Project Location: 32.808,-103.7725-

Sampler Name: Mafio SARKIS

**BILL TO**  
P.O. #:  
Company: ENSOLUM, LLC  
Attn: AIMEE COLE  
Address:  
City:  
State: Zip:  
Phone #:  
Fax #:

**ANALYSIS REQUEST**

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:			
HAUSUDY	Backfill	—	G	1			<input checked="" type="checkbox"/>					9/13/24	1330	BTEX TPH Chlorides
<i>MJS</i>														

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: *[Signature]*

Date: 9/13/24

Received By: *[Signature]*

Time: 1:50P

Relinquished By: *[Signature]*

Date: 9/13/24

Received By: *[Signature]*

Verbal Result:  Yes  No Add'l Phone #:  
All Results are emailed. Please provide Email address:  
REMARKS: *acole@ensolum.com / msarkis@ensolum.com*

Delivered By: (Circle One)  Observed Temp. °C  Corrected Temp. °C

Sampler - UPS - Bus - Other: *8:00* *8:30*

Sample Condition Cool Intact  Yes  No

Checked By: *[Signature]*

Turnaround Time:  Standard  Rush  Bacteria (only) Sample Condition Cool Intact  Yes  No

Thermometer ID #113 *1110* *0:00*

Correction Factor 0.5°C

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



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

---

September 19, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/13/24 15:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/13/2024	Sampling Date:	09/13/2024
Reported:	09/19/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SB - 12 16 (H245605-01)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/17/2024	ND	2.24	112	2.00	5.71		
Toluene*	<0.050	0.050	09/17/2024	ND	2.35	117	2.00	0.614	QR-03	
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	2.56	128	2.00	0.262	QR-03	
Total Xylenes*	<0.150	0.150	09/17/2024	ND	7.73	129	6.00	0.958		
Total BTEX	<0.300	0.300	09/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	09/17/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/16/2024	ND	208	104	200	5.11		
DRO >C10-C28*	<10.0	10.0	09/16/2024	ND	202	101	200	4.18		
EXT DRO >C28-C36	<10.0	10.0	09/16/2024	ND						

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.3 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

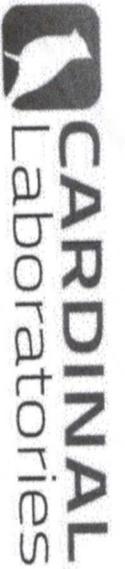
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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

**ANALYSIS REQUEST**

Company Name: Ensolum, LLC Project Manager: Aimee Cole Address: 3122 National Parks Hwy City: Carlsbad State: NM Zip: 88220 Phone #: (720) 384-7365 Fax #: _____ Project #: 03E2057102 Project Owner: _____ Project Name: MCA 151 Project Location: 32, 808, -103, 7725 Sampler Name: MARIO SARKIS FOR LAB USE ONLY		P.O. #: _____ Company: ENSOLUM, LLC Attn: Aimee Cole Address: _____ City: _____ State: _____ Zip: _____ Phone #: _____ Fax #: _____	
Lab I.D. <b>HR451005</b> Sample I.D. <b>SB-12</b> Depth (feet) <b>6</b> (G)RAB OR (C)OMP. <b>6</b> # CONTAINERS <b>1</b> MATRIX GROUNDWATER _____ WASTEWATER _____ SOIL <input checked="" type="checkbox"/> OIL _____ SLUDGE _____ OTHER: _____ ACID/BASE: _____ ICE / COOL <input checked="" type="checkbox"/> OTHER: _____		DATE <b>9/13/24</b> TIME <b>Day</b> BTEX _____ TPH _____ Chlorides _____	
Relinquished By: _____ Date: <b>9/13/24</b> Time: <b>1:57</b>		Received By: <b>APR</b> Date: _____ Time: _____	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____ Observed Temp. °C <b>29.2</b> Corrected Temp. °C <b>23.2</b>		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Checked By: (Initials) <b>AP</b>	
Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: _____ All Results are emailed. Please provide Email address: REMARKS: <b>acole@ensolum.com / msarkis@ensolum.com</b>		Turnaround Time: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush Thermometer ID #443-#1100 Correction Factor <b>0.5°C - 0.6°C</b> Bacteria (only) Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> 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

---

September 19, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/13/24 15:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/13/2024	Sampling Date:	09/13/2024
Reported:	09/19/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SB - 12 11' (H245606-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/17/2024	ND	2.24	112	2.00	5.71	
Toluene*	<0.050	0.050	09/17/2024	ND	2.35	117	2.00	0.614	
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	2.56	128	2.00	0.262	
Total Xylenes*	<0.150	0.150	09/17/2024	ND	7.73	129	6.00	0.958	
Total BTEX	<0.300	0.300	09/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	09/17/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/16/2024	ND	208	104	200	5.11	
DRO >C10-C28*	<10.0	10.0	09/16/2024	ND	202	101	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	09/16/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/13/2024	Sampling Date:	09/13/2024
Reported:	09/19/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SB - 12 14' (H245606-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/17/2024	ND	2.24	112	2.00	5.71	
Toluene*	<0.050	0.050	09/17/2024	ND	2.35	117	2.00	0.614	
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	2.56	128	2.00	0.262	
Total Xylenes*	<0.150	0.150	09/17/2024	ND	7.73	129	6.00	0.958	
Total BTEX	<0.300	0.300	09/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	09/17/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/16/2024	ND	208	104	200	5.11	
DRO >C10-C28*	<10.0	10.0	09/16/2024	ND	202	101	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	09/16/2024	ND					

Surrogate: 1-Chlorooctane 113 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/13/2024	Sampling Date:	09/13/2024
Reported:	09/19/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SB - 2 10' (H245606-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/17/2024	ND	2.24	112	2.00	5.71	
Toluene*	<0.050	0.050	09/17/2024	ND	2.35	117	2.00	0.614	
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	2.56	128	2.00	0.262	
Total Xylenes*	<0.150	0.150	09/17/2024	ND	7.73	129	6.00	0.958	
Total BTEX	<0.300	0.300	09/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 117 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	09/17/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2024	ND	208	104	200	5.11	
DRO >C10-C28*	<10.0	10.0	09/17/2024	ND	202	101	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	09/17/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/13/2024	Sampling Date:	09/13/2024
Reported:	09/19/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SB - 2 14' (H245606-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/17/2024	ND	2.24	112	2.00	5.71	
Toluene*	<0.050	0.050	09/17/2024	ND	2.35	117	2.00	0.614	
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	2.56	128	2.00	0.262	
Total Xylenes*	<0.150	0.150	09/17/2024	ND	7.73	129	6.00	0.958	
Total BTEX	<0.300	0.300	09/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/17/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2024	ND	208	104	200	5.11	
DRO >C10-C28*	<10.0	10.0	09/17/2024	ND	202	101	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	09/17/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/13/2024	Sampling Date:	09/13/2024
Reported:	09/19/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SB - 13 9' (H245606-05)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/17/2024	ND	2.24	112	2.00	5.71	
Toluene*	<0.050	0.050	09/17/2024	ND	2.35	117	2.00	0.614	
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	2.56	128	2.00	0.262	
Total Xylenes*	<0.150	0.150	09/17/2024	ND	7.73	129	6.00	0.958	
Total BTEX	<0.300	0.300	09/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1150	16.0	09/17/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2024	ND	208	104	200	5.11	
DRO >C10-C28*	<10.0	10.0	09/17/2024	ND	202	101	200	4.18	
EXT DRO >C28-C36	<10.0	10.0	09/17/2024	ND					

Surrogate: 1-Chlorooctane 111 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/13/2024	Sampling Date:	09/13/2024
Reported:	09/19/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Alyssa Parras
Project Location:	32.808, -103.7725		

**Sample ID: SB - 13 12' (H245606-06)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/17/2024	ND	2.24	112	2.00	5.71		
Toluene*	<0.050	0.050	09/17/2024	ND	2.35	117	2.00	0.614		
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	2.56	128	2.00	0.262		
Total Xylenes*	<0.150	0.150	09/17/2024	ND	7.73	129	6.00	0.958		
Total BTEX	<0.300	0.300	09/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	09/17/2024	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/17/2024	ND	208	104	200	5.11		
DRO >C10-C28*	<10.0	10.0	09/17/2024	ND	202	101	200	4.18		
EXT DRO >C28-C36	<10.0	10.0	09/17/2024	ND						

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 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

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
BS-3 Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
\*\* Samples not received at proper temperature of 6°C or below.
\*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager





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September 17, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/16/24 15:58.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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, flowing "C" and "K".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/16/2024	Sampling Date:	09/16/2024
Reported:	09/17/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Shalyn Rodriguez
Project Location:	32.808, -103.7725		

**Sample ID: FS 34 14 (H245625-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/17/2024	ND	2.17	108	2.00	5.65	
Toluene*	<0.050	0.050	09/17/2024	ND	2.07	103	2.00	6.26	
Ethylbenzene*	<0.050	0.050	09/17/2024	ND	2.06	103	2.00	6.84	
Total Xylenes*	<0.150	0.150	09/17/2024	ND	6.16	103	6.00	7.27	
Total BTEX	<0.300	0.300	09/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/17/2024	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/17/2024	ND	194	96.9	200	2.79	
DRO >C10-C28*	212	10.0	09/17/2024	ND	199	99.7	200	8.63	
EXT DRO >C28-C36	45.2	10.0	09/17/2024	ND					

Surrogate: 1-Chlorooctane 83.7 % 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



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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

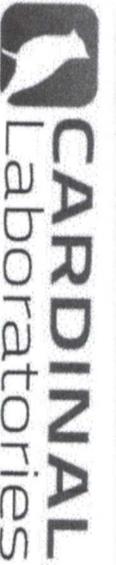
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*Celey D. Keene*

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**

**BILL TO**

**ANALYSIS REQUEST**

Company Name: Ensolum, LLC  
 Project Manager: Aimee Cole  
 Address: 3122 National Parks Hwy  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: (720) 384-7365 Fax #:   
 Project #: 03E2057102 Project Owner:   
 Project Name: MCA 151  
 Project Location: 32. 808, -103, 7725  
 Sampler Name: Mario Sarrhis  
 P.O. #:   
 Company: ENSOLUM, LLC  
 Attn: Aimee Cole  
 Address:   
 City:   
 State: Zip:   
 Phone #:   
 Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
H045025 1	F534	14	C	1								9/16/24	1356	BTEX TPH Chlorides
<i>MPS</i>														

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Relinquished By: *[Signature]* Date: 9/16/24  
 Received By: *[Signature]* Date: 9/16/24  
 Relinquished By: *[Signature]* Date: 9/16/24  
 Received By: *[Signature]* Date: 9/16/24

Delivered By: (Circle One) Observed Temp. °C: 2.4  
 Sampler - UPS - Bus - Other: Corrected Temp. °C: 1.8  
 Sample Condition Cool Intact  Yes  No  
 Checked By: (Initials) *[Signature]*

Turnaround Time: Standard  Rush  Bacteria (only)  Sample Condition Cool Intact  Observed Temp. °C:   
 Corrected Temp. °C:   
 Verbal Result:  Yes  No Add'l Phone #:   
 All Results are emailed. Please provide Email address:   
 REMARKS: *cc: cele@ensolum.com / MsSarrhis@ensolum.com*

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



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

---

October 03, 2024

AIMEE COLE

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: MCA 151 FLOWLINE RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/27/24 13:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/27/2024	Sampling Date:	09/27/2024
Reported:	10/03/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Tamara Oldaker
Project Location:	32.808, -103.7725		

**Sample ID: SB - 17 0-0.5' (H245901-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/30/2024	ND	2.02	101	2.00	1.28	
Toluene*	<0.050	0.050	09/30/2024	ND	2.08	104	2.00	0.377	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.09	105	2.00	0.539	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	6.25	104	6.00	0.793	
Total BTEX	<0.300	0.300	09/30/2024	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	09/30/2024	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	10/01/2024	ND	197	98.7	200	1.81	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	176	88.1	200	3.49	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane 89.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

ENSOLUM  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/27/2024	Sampling Date:	09/27/2024
Reported:	10/03/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Tamara Oldaker
Project Location:	32.808, -103.7725		

**Sample ID: SB - 17 0.5-1.0' (H245901-02)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/30/2024	ND	2.02	101	2.00	1.28	
Toluene*	<0.050	0.050	09/30/2024	ND	2.08	104	2.00	0.377	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.09	105	2.00	0.539	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	6.25	104	6.00	0.793	
Total BTEX	<0.300	0.300	09/30/2024	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	<16.0	16.0	09/30/2024	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	10/01/2024	ND	197	98.7	200	1.81	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	176	88.1	200	3.49	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane 88.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.7 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/27/2024	Sampling Date:	09/27/2024
Reported:	10/03/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Tamara Oldaker
Project Location:	32.808, -103.7725		

**Sample ID: SB - 18 0-0.5' (H245901-03)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/30/2024	ND	2.02	101	2.00	1.28	
Toluene*	<0.050	0.050	09/30/2024	ND	2.08	104	2.00	0.377	
Ethylbenzene*	<0.050	0.050	09/30/2024	ND	2.09	105	2.00	0.539	
Total Xylenes*	<0.150	0.150	09/30/2024	ND	6.25	104	6.00	0.793	
Total BTEX	<0.300	0.300	09/30/2024	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	09/30/2024	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	10/01/2024	ND	197	98.7	200	1.81	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	176	88.1	200	3.49	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane 89.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.6 % 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  
 AIMEE COLE  
 3122 NATIONAL PARKS HWY  
 CARLSBAD NM, 88220  
 Fax To:

Received:	09/27/2024	Sampling Date:	09/27/2024
Reported:	10/03/2024	Sampling Type:	Soil
Project Name:	MCA 151 FLOWLINE RELEASE	Sampling Condition:	Cool & Intact
Project Number:	03E2057102	Sample Received By:	Tamara Oldaker
Project Location:	32.808, -103.7725		

**Sample ID: SB - 18 0.5-1.0' (H245901-04)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/01/2024	ND	1.95	97.3	2.00	2.58	
Toluene*	<0.050	0.050	10/01/2024	ND	2.01	100	2.00	2.54	
Ethylbenzene*	<0.050	0.050	10/01/2024	ND	2.02	101	2.00	2.58	
Total Xylenes*	<0.150	0.150	10/01/2024	ND	6.05	101	6.00	2.49	
Total BTEX	<0.300	0.300	10/01/2024	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	09/30/2024	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	10/01/2024	ND	197	98.7	200	1.81	
DRO >C10-C28*	<10.0	10.0	10/01/2024	ND	176	88.1	200	3.49	
EXT DRO >C28-C36	<10.0	10.0	10/01/2024	ND					

Surrogate: 1-Chlorooctane 93.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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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

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*

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

**BILL TO**

ANALYSIS REQUEST

Company Name: Ensolium, LLC  
 Project Manager: Aimee Cole  
 Address: 3122 National Parks Hwy  
 City: Carlsbad State: NM Zip: 88220  
 Phone #: (720) 384-7365 Fax #: 88220  
 Project #: 03E2057102 Project Owner:  
 Project Name: MGA151  
 Project Location: 38.908-103.7785  
 Sampler Name: Mario SARKIS  
 P.O. #: Company: Ensolium, LLC  
 Attn: Aimee Cole  
 Address: City: State: Zip:  
 Phone #: Fax #:

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:			
H245901	1 SB-17	0-0.5	G	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9/27/24	1100	BTEX
	2 SB-17	0.5-1.0	G	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9/27/24	1101	TPH
	3 SB-18	0-0.5	G	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9/27/24	1103	Chlorides
	4 SB-18	0.5-1.0	G	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9/27/24	1105	

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Relinquished By: [Signature]  
 Date: 9/27/24  
 Received By: [Signature]  
 Date: 9/27/24  
 Turnaround Time: Standard  Rush   
 Thermometer ID #449 #146  
 Correction Factor -0.3°C  
 Bacteria (only)  Bacteria (only)   
 Cool Intact  Cool Intact   
 Sample Condition  Sample Condition   
 Observed Temp. °C 36  
 Corrected Temp. °C 30  
 REMARKS: acole@ensolium.com/msarkis@ensolium.com

Delivered By: (Circle One)  UPS  Bus  Other:  
 Observed Temp. °C 36  
 Corrected Temp. °C 30  
 Sample Condition Cool Intact  Yes  No  
 CHECKED BY: [Signature]  
 Verbal Result:  Yes  No Add'l Phone #:  
 All Results are emailed. Please provide Email address:  
 Cardinal cannot accept verbal changes. Please email changes to coley,keene@cardinallabsnm.com

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

QUESTIONS

Action 392403

**QUESTIONS**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 392403
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

<b>Prerequisites</b>	
Incident ID (n#)	nAPP2328619341
Incident Name	NAPP2328619341 MCA UNIT 151 FLOWLINE RELEASE @ 30-025-00739
Incident Type	Produced Water Release
Incident Status	Reclamation Report Received
Incident Well	[30-025-00739] MCA UNIT #151

<b>Location of Release Source</b>	
<i>Please answer all the questions in this group.</i>	
Site Name	MCA UNIT 151 FLOWLINE RELEASE
Date Release Discovered	10/08/2023
Surface Owner	Federal

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

<b>Nature and Volume of Release</b>	
<i>Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.</i>	
Crude Oil Released (bbls) Details	Cause: Corrosion   Flow Line - Production   Crude Oil   Released: 1 BBL   Recovered: 0 BBL   Lost: 1 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion   Flow Line - Production   Produced Water   Released: 15 BBL   Recovered: 0 BBL   Lost: 15 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	A flowline rupture resulted in the release of 1 bbls of crude oil and 15 bbls of produced water off-pad into open pasture.

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QUESTIONS, Page 2

Action 392403

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 392403
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	<b>No, according to supplied volumes this does not appear to be a "gas only" report.</b>
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	<b>No</b>
Reasons why this would be considered a submission for a notification of a major release	<i>Unavailable.</i>

*With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.*

**Initial Response**

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

The source of the release has been stopped	<b>True</b>
The impacted area has been secured to protect human health and the environment	<b>True</b>
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	<b>True</b>
All free liquids and recoverable materials have been removed and managed appropriately	<b>True</b>
If all the actions described above have not been undertaken, explain why	<i>Not answered.</i>

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Aimee Cole Email: acole@ensolum.com Date: 05/07/2024
--	--

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QUESTIONS, Page 3

Action 392403

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 392403
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

**Site Characterization**  
*Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

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

**Remediation Plan**

*Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

**Soil Contamination Sampling:** (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	5360
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	40400
GRO+DRO (EPA SW-846 Method 8015M)	34320
BTEX (EPA SW-846 Method 8021B or 8260B)	587
Benzene (EPA SW-846 Method 8021B or 8260B)	23.7

*Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.*

On what estimated date will the remediation commence	08/01/2024
On what date will (or did) the final sampling or liner inspection occur	09/01/2024
On what date will (or was) the remediation complete(d)	09/01/2024
What is the estimated surface area (in square feet) that will be reclaimed	13000
What is the estimated volume (in cubic yards) that will be reclaimed	2000
What is the estimated surface area (in square feet) that will be remediated	13000
What is the estimated volume (in cubic yards) that will be remediated	2500

*These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.*

*The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.*

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QUESTIONS, Page 4

Action 392403

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199 Action Number: 392403 Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)
--	---

**QUESTIONS**

**Remediation Plan (continued)**

*Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

**This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:**

*(Select all answers below that apply.)*

(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	R360 ARTESIA LLC LANDFARM [FEEM0112340644]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	No
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

*Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.*

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Aimee Cole Email: <a href="mailto:acole@ensolum.com">acole@ensolum.com</a> Date: 05/07/2024
--	---

*The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.*

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QUESTIONS, Page 5

Action 392403

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 392403
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

**Deferral Requests Only**

*Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*

Requesting a deferral of the remediation closure due date with the approval of this submission	No
--	----

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QUESTIONS, Page 6

Action 392403

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 392403
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

<b>Sampling Event Information</b>	
Last sampling notification (C-141N) recorded	<b>385206</b>
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	<b>09/23/2024</b>
What was the (estimated) number of samples that were to be gathered	<b>10</b>
What was the sampling surface area in square feet	<b>2000</b>

**Remediation Closure Request**

*Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.*

Requesting a remediation closure approval with this submission	<b>Yes</b>
Have the lateral and vertical extents of contamination been fully delineated	<b>Yes</b>
Was this release entirely contained within a lined containment area	<b>No</b>
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	<b>Yes</b>
What was the total surface area (in square feet) remediated	<b>13200</b>
What was the total volume (cubic yards) remediated	<b>4800</b>
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	<b>Yes</b>
What was the total surface area (in square feet) reclaimed	<b>13200</b>
What was the total volume (in cubic yards) reclaimed	<b>4800</b>
Summarize any additional remediation activities not included by answers (above)	<b>Incident Number nAPP2420871904 was remediated in coordination with nAPP2328619341. Remediation activities were completed in accordance with the approved work plan.</b>

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Aimee Cole Email: acole@ensolum.com Date: 10/14/2024
--	--

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QUESTIONS, Page 7

Action 392403

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 392403
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

**Reclamation Report**

*Only answer the questions in this group if all reclamation steps have been completed.*

Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	13200
What was the total volume of replacement material (in cubic yards) for this site	4800

*Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.*

Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeding commence(d)	10/04/2024

Summarize any additional reclamation activities not included by answers (above)	Reclamation activities are summarized in the attached Closure Request.
---	--

*The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 NMAC.*

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Aimee Cole Email: acole@ensolum.com Date: 10/14/2024
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 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

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

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

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

QUESTIONS, Page 8

Action 392403

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 392403
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**QUESTIONS**

<b>Revegetation Report</b>	
<i>Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.</i>	
Requesting a restoration complete approval with this submission	No
<i>Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.</i>	

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CONDITIONS

Action 392403

**CONDITIONS**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 392403
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

**CONDITIONS**

Created By	Condition	Condition Date
amaxwell	The reclamation report has been approved pursuant to 19.15.29.13 E. NMAC. The acceptance of this 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; or if the location fails to revegetate properly. In addition, OCD approval does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.	10/16/2024
amaxwell	A revegetation report will not be accepted until revegetation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	10/16/2024
amaxwell	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeded activities, inspections, and final pictures when revegetation is achieved.	10/16/2024