



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 NMOCDC 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 NMOCDC requirement for the reclaimed area to contain non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg and TPH

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.

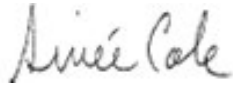
Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Depth to groundwater was estimated to be greater than 70 feet bgs at the Site and no sensitive receptors were identified near the release extent. Maverick believes the remedial actions completed are protective 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.

Sincerely,
Ensolum, LLC



Aimee Cole
Senior Managing Scientist

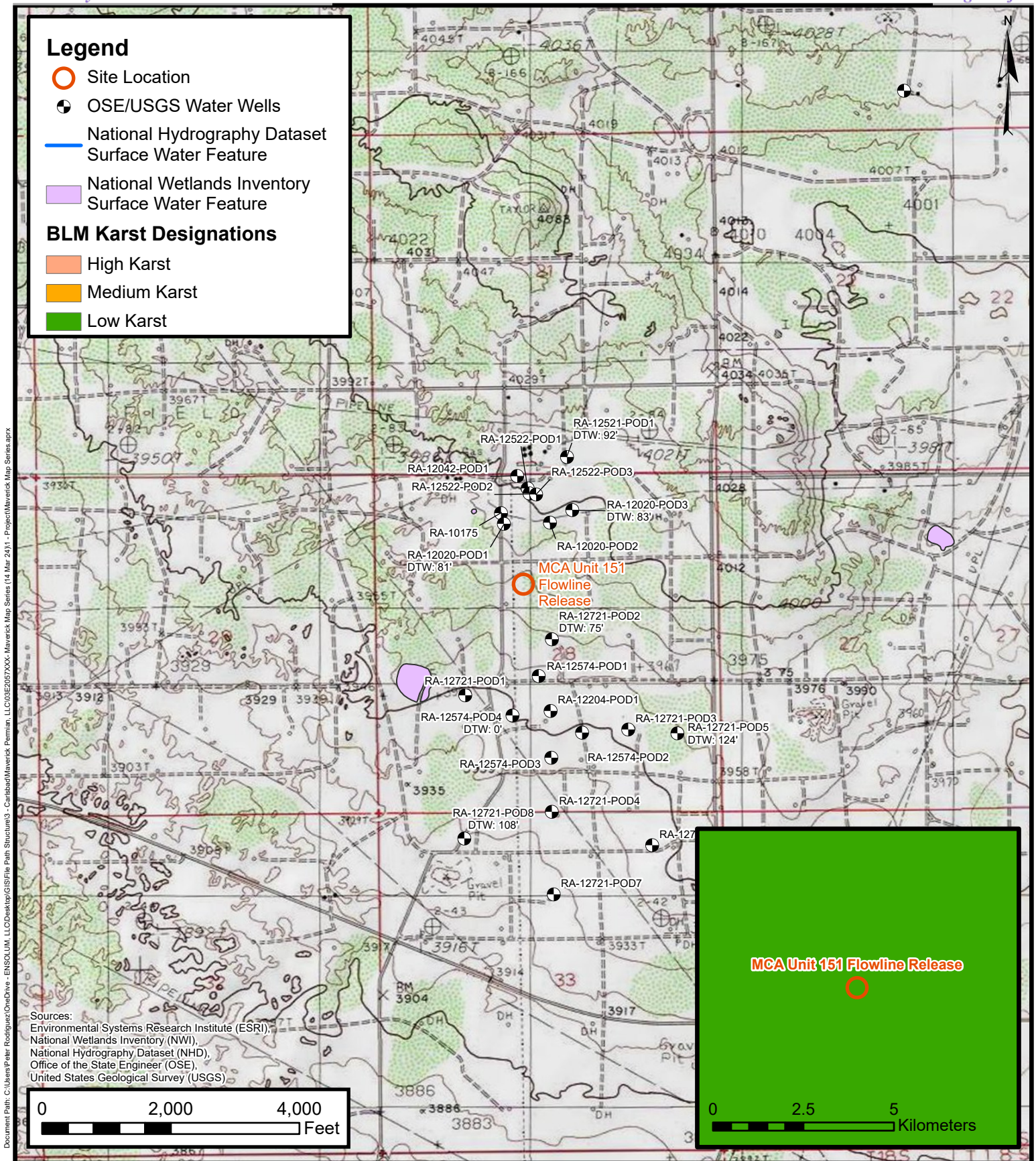
cc: Bryce Wagoner, Maverick Natural Resources
Bureau of Land Management

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



Site Receptor Map

MCA Unit 151 Flowline Release

Maverick Permian, LLC

Incident Number: nAPP2328619341 and nAPP2420871904

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

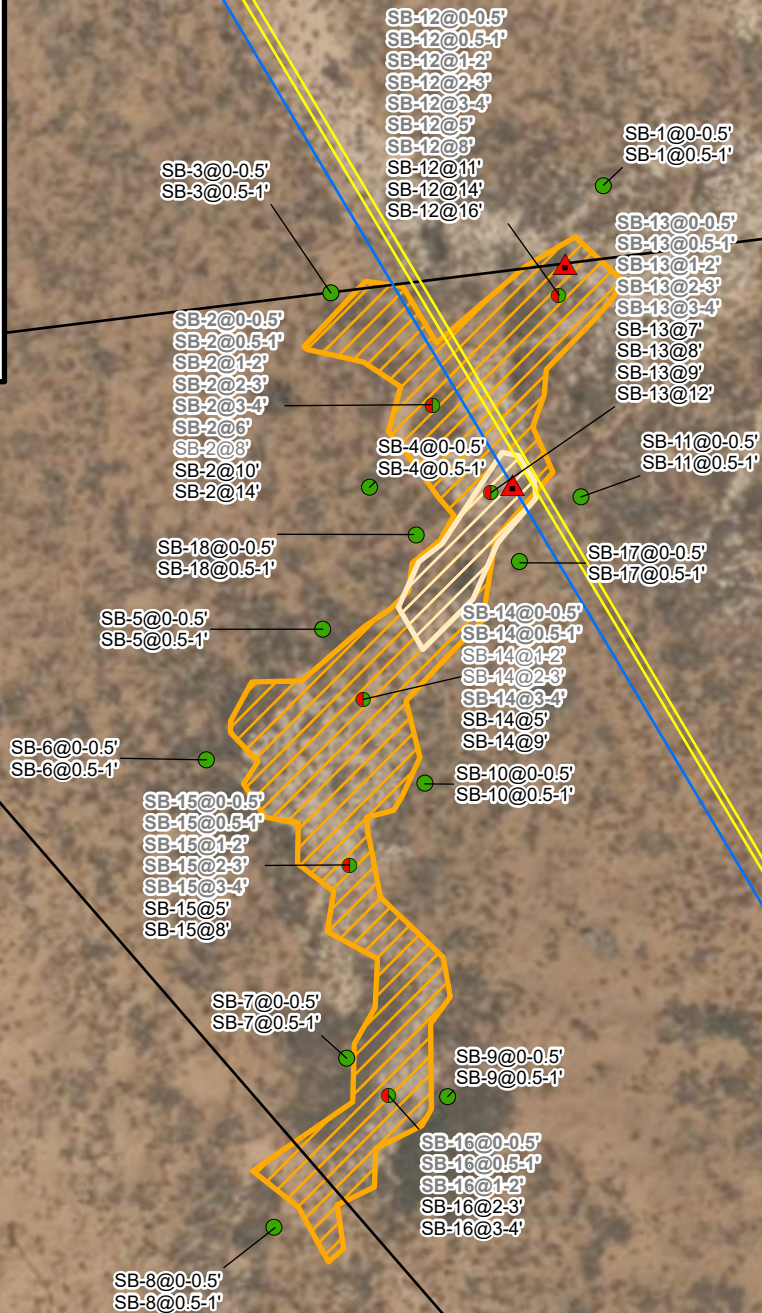
FIGURE

1



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.

0 15 30 60 90 120
 Feet

Sources: Environmental Systems Research Institute (ESRI)

Delineation Soil Sample Locations

Maverick Permian, LLC

MCA Unit 151 Flowline Release

Incident Number: nAPP2328619341 and nAPP2420871904

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

Lea County, New Mexico

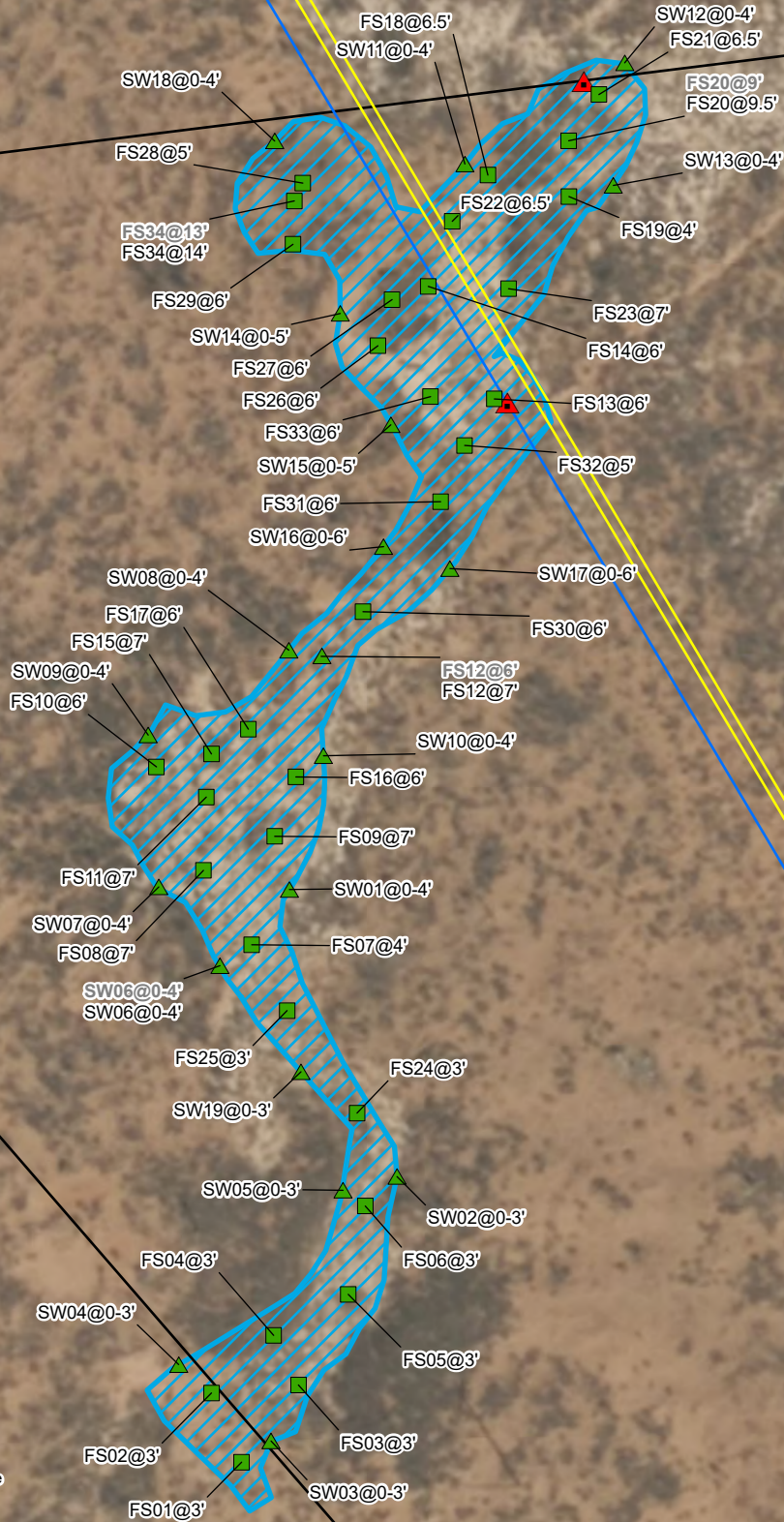
FIGURE

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



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.

0 12.5 25 50 75 100
 Feet

Sources: Environmental Systems Research Institute (ESRI)

Excavation Soil Sample Locations

Maverick Permian, LLC

MCA Unit 151 Flowline Release

Incident Number: nAPP2328619341 and nAPP2420871904

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

Lea County, New Mexico

FIGURE

3





TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclamation Requirements for the top four feet			NE	NE	NE	NE	NE	NE	100	600
Delineation Soil Samples										
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	22,100	31,550	48.0
SB-2	10/19/2023	0.5-1	<0.050	0.75	<50.0	14,700	7,230	14,700	21,930	48.0
SB-2	10/19/2023	1-2	<0.050	<0.300	<50.0	10,900	5,830	10,900	16,730	32.0
SB-2	10/19/2023	2-3	<0.050	<0.300	<50.0	9,660	4,780	9,660	14,440	<16.0
SB-2	10/19/2023	3-4	<0.050	<0.300	<50.0	5,550	3,200	5,550	8,750	16.0
SB-2	7/15/2024	6	<0.100	16.6	1,150	15,300	2,790	16,450	19,240	<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



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclamation Requirements for the top four feet			NE	NE	NE	NE	NE	NE	100	600
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	23.7	587	8,180	25,800	5,430	33,980	39,410	3,200
SB-12	10/19/2023	0.5-1	13.9	541	6,940	14,300	2,830	21,240	24,070	1,710
SB-12	10/19/2023	1-2	6.50	313	3,610	8,490	1,550	12,100	13,650	2,200
SB-12	10/19/2023	2-3	1.88	147	1,390	3,690	555	5,080	5,635	5,360
SB-12	10/19/2023	3-4	1.53	81.9	2,260	6,770	1,070	9,030	10,100	4,880
SB-12	7/15/2024	5	<0.050	3.92	366	4,560	656	4,926	5,582	3,000
SB-12	7/15/2024	8	<0.050	2.80	393	9,840	1,870	10,233	12,103	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



TABLE 1
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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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclamation Requirements for the top four feet			NE	NE	NE	NE	NE	NE	100	600
SB-13	10/19/2023	0-0.5	<0.050	132	2,560	15,300	2,970	17,860	20,830	96.0
SB-13	10/19/2023	0.5-1	<0.050	7.48	229	2,300	469	2,529	2,998	128
SB-13	10/19/2023	1-2	<0.050	0.84	27	706	155	733	888	256
SB-13	10/19/2023	2-3	<0.050	0.36	<10.0	421	90	421	511	1,800
SB-13	10/19/2023	3-4	<0.050	<0.300	<10.0	501	107	501	608	1,710
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	13,600	16,010	2,400
SB-14	10/19/2023	0.5-1	<0.050	<0.300	<10.0	145	24	145	169	1,960
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	496	599	650
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	107	2,820	31,500	6,080	34,320	40,400	2,160
SB-15	10/19/2023	0.5-1	2.93	98.1	2,600	30,500	5,830	33,100	38,930	2,160
SB-15	10/19/2023	1-2	<5.00	26.4	1,300	12,600	1,980	13,900	15,880	1,640
SB-15	10/19/2023	2-3	<0.20	26.6	366	3,020	587	3,386	3,973	288
SB-15	10/19/2023	3-4	<0.050	2.3	68.8	832	<10.0	901	901	656
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



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclamation Requirements for the top four feet			NE	NE	NE	NE	NE	NE	100	600
SB-16	10/19/2023	0-0.5	<0.050	<0.300	<10.0	1,810	329	1,810	2,139	32.0
SB-16	10/19/2023	0.5-1	<0.050	<0.300	<10.0	211	59.9	211	271	32.0
SB-16	10/19/2023	1-2	<0.050	<0.300	<10.0	165	31.8	165	197	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	1,511	1,753	528
FS12	9/12/2024	7	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	960



TABLE 1
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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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclamation Requirements for the top four feet			NE	NE	NE	NE	NE	NE	100	600
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	93	795	2,690	396.0	3,485	3,881	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



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclamation Requirements for the top four feet			NE	NE	NE	NE	NE	NE	100	600
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	1,640	2,042	32.0
FS34	9/16/2024	14	<0.050	<0.300	<10.0	212	45.2	212	257	32.0
Excavation Sidewall Soil Samples										
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	141	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



TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
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)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	10,000
NMOCD Reclamation Requirements for the top four feet			NE	NE	NE	NE	NE	NE	100	600
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



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)

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

Driller License: 1456	Driller Company: WHITE DRILLING COMPANY
Driller Name: JOHN W WHITE	
Drill Start Date: 04/18/2019	Drill Finish Date: 04/19/2019
Log File Date: 05/15/2019	PCW Rcv Date:
Pump Type:	Pipe Discharge Size:
Casing Size: 2.00	Depth Well: 124 feet
	Plug Date:
	Source: Shallow
	Estimated Yield: 0 GPM
	Depth Water: 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)				(quarters are smallest to largest)				(NAD83 UTM in meters)		
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y			
	RA 12020 POD1	2	2	1	28	17S	32E	614828	3630954			
<hr/>												
Driller License:		1456		Driller Company:			WHITE DRILLING COMPANY					
Driller Name:		WHITE, JOHN (LD)										
Drill Start Date:		09/24/2013		Drill Finish Date:			09/25/2013		Plug Date:			
Log File Date:		10/07/2013		PCW Rcv Date:						Source: Shallow		
Pump Type:					Pipe Discharge Size:						Estimated Yield:	
Casing Size:		2.00		Depth Well:			120 feet		Depth Water:		81 feet	
<hr/>												
Water Bearing Stratifications:				Top	Bottom	Description						
				70	111	Sandstone/Gravel/Conglomerate						
				111	120	Shale/Mudstone/Siltstone						
<hr/>												
Casing Perforations:				Top	Bottom							
				75	110							
<hr/>												

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



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


							Sample Name: SB-2		Date: July-September 2024	
							Site Name: MCA Unit 151 Flowline Release			
							Incident Number: nAPP2328619341			
							Job Number: 03E2057102			
LITHOLOGIC / SOIL SAMPLING LOG							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			
LITHOLOGIC / SOIL SAMPLING LOG								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				
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		Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform, small gravel present			
M	851	2.2	N			12					
						13	SW				
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			
LITHOLOGIC / SOIL SAMPLING LOG								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		Clayey Sand - Loose, Pink with white mottling, low plasticity, moist, non cohesive			
M	403	0	N	SB-13	8	8					
M	1,355	0.7	N	SB-13	9	9	SC				
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						
LITHOLOGIC / SOIL SAMPLING LOG				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	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform
						3		
						4		
M	840	6.2	N	SB-14	5	5		
M	274	3.2	N			6		
M	235	2.7	N			7	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	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			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: Mario Sarkis		Method: Hand Auger	
Coordinates: 32.807835, -103.772524								Hole Diameter: 3"		Total Depth: 8 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	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform			
						1					
						2					
						3					
						4	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	235	3.6	N	SB-15	5	5					
M	201	0.8	N			6					
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			
LITHOLOGIC / SOIL SAMPLING LOG							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	0.0-0.5	0	SW	Sand - Medium to soft, red to medium brown, medium to fine grain, Dry, Non-Plastic, Noncohesive, Massive, Non-Uniform		
D	<168	2.7	N	SB-17	0.5-1.0	1				
Total depth @ 1 ft bgs										

						Sample Name: SB-18		Date: 9/27/2024	
						Site Name: MCA Unit 151 Flowline Release			
						Incident Number: nAPP2328619341			
						Job Number: 03E2057102			
LITHOLOGIC / SOIL SAMPLING LOG						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



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

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

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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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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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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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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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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 - 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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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 - 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



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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 - 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

Cardinal Laboratories

*=Accredited Analyte

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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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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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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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, 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 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, 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 122 % 48.2-134

Surrogate: 1-Chlorooctadecane 138 % 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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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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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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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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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 (.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, 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	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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, 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 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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, 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 93.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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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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, 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 99.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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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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	
Chloride	48.0	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	90.2	200	2.17	
DRO >C10-C28*	22100	50.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	9450	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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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		
Toluene*	0.181	0.050	10/23/2023	ND	2.00	100	2.00	2.45		
Ethylbenzene*	0.180	0.050	10/23/2023	ND	2.01	101	2.00	1.55		
Total Xylenes*	0.387	0.150	10/23/2023	ND	6.10	102	6.00	0.0889		
Total BTEX	0.748	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	
Chloride	48.0	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	90.2	200	2.17	
DRO >C10-C28*	14700	50.0	10/23/2023	ND	196	98.0	200	2.53	
EXT DRO >C28-C36	7230	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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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	
Chloride	32.0	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	
DRO >C10-C28*	10900	50.0	10/23/2023	ND	182	91.2	200	2.74	QM-07
EXT DRO >C28-C36	5830	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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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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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	
DRO >C10-C28*	9660	50.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	4780	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	
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	
DRO >C10-C28*	5550	50.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	3200	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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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
Benzene*	23.7	2.00	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	178	2.00	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	149	2.00	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	237	6.00	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	587	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	
Chloride	3200	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*	8180	50.0	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	25800	50.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	5430	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
Benzene*	13.9	2.00	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	168	2.00	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	143	2.00	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	215	6.00	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	541	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	
Chloride	1710	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*	6940	50.0	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	14300	50.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	2830	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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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
Benzene*	6.50	2.00	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	89.2	2.00	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	83.1	2.00	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	134	6.00	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	313	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	
Chloride	2200	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*	3610	50.0	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	8490	50.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	1550	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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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
Benzene*	1.88	0.500	10/23/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	38.3	0.500	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	40.1	0.500	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	66.9	1.50	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	147	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	
Chloride	5360	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*	1390	50.0	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	3690	50.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	555	50.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 143 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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
Benzene*	1.53	0.200	10/24/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	19.9	0.200	10/24/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	22.4	0.200	10/24/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	38.1	0.600	10/24/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	81.9	1.20	10/24/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 167 % 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	4880	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*	2260	50.0	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	6770	50.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	1070	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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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	
Toluene*	9.68	0.500	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	41.0	0.500	10/23/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	81.3	1.50	10/23/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	132	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
Chloride	96.0	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*	2560	50.0	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	15300	50.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	2970	50.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 387 % 48.2-134

Surrogate: 1-Chlorooctadecane 276 % 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 - 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	
Toluene*	0.455	0.050	10/24/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	2.14	0.050	10/24/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	4.89	0.150	10/24/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	7.48	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
Chloride	128	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*	229	10.0	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	2300	10.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	469	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	
Ethylbenzene*	0.147	0.050	10/24/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	0.696	0.150	10/24/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	0.843	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
Chloride	256	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*	26.9	10.0	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	706	10.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	155	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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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		
Ethylbenzene*	0.093	0.050	10/24/2023	ND	2.01	101	2.00	1.55		
Total Xylenes*	0.267	0.150	10/24/2023	ND	6.10	102	6.00	0.0889		
Total BTEX	0.360	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	
Chloride	1800	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	
DRO >C10-C28*	421	10.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	89.8	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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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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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	
Chloride	1710	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	
DRO >C10-C28*	501	10.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	107	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
Benzene*	0.120	0.100	10/24/2023	ND	1.95	97.4	2.00	2.84	
Toluene*	2.74	0.100	10/24/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	11.2	0.100	10/24/2023	ND	2.01	101	2.00	1.55	
Total Xylenes*	29.9	0.300	10/24/2023	ND	6.10	102	6.00	0.0889	
Total BTEX	44.0	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
Chloride	2400	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
GRO C6-C10*	1200	50.0	10/23/2023	ND	180	89.9	200	0.633	
DRO >C10-C28*	12400	50.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	2410	50.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 255 % 48.2-134

Surrogate: 1-Chlorooctadecane 235 % 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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1960	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*	145	10.0	10/23/2023	ND	182	91.2	200	2.74	
EXT DRO >C28-C36	23.5	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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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	
Toluene*	0.085	0.050	10/23/2023	ND	2.00	100	2.00	2.45	
Ethylbenzene*	0.058	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	
Chloride	496	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*	34.8	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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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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	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*	80.3	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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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		
Toluene*	13.1	2.00	10/23/2023	ND	2.00	100	2.00	2.45		
Ethylbenzene*	27.6	2.00	10/23/2023	ND	2.01	101	2.00	1.55		
Total Xylenes*	66.0	6.00	10/23/2023	ND	6.10	102	6.00	0.0889		
Total BTEX	107	12.0	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	2160	16.0	10/23/2023	ND	400	100	400	7.69		
TPH 8015M		mg/kg		Analyzed By: MS						
									S-06	

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

Surrogate: 1-Chlorooctane 643 % 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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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
Benzene*	2.93	2.00	10/23/2023	ND	2.15	107	2.00	0.974	QM-07
Toluene*	13.0	2.00	10/23/2023	ND	2.16	108	2.00	5.19	QM-07
Ethylbenzene*	23.6	2.00	10/23/2023	ND	2.22	111	2.00	3.28	
Total Xylenes*	58.5	6.00	10/23/2023	ND	6.41	107	6.00	4.45	QM-07
Total BTEX	98.1	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
Chloride	2160	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	
GRO C6-C10*	2600	50.0	10/23/2023	ND	180	89.9	200	0.633		
DRO >C10-C28*	30500	50.0	10/23/2023	ND	182	91.2	200	2.74		
EXT DRO >C28-C36	5830	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		
Toluene*	2.35	0.500	10/23/2023	ND	2.16	108	2.00	5.19		
Ethylbenzene*	5.79	0.500	10/23/2023	ND	2.22	111	2.00	3.28		
Total Xylenes*	18.3	1.50	10/23/2023	ND	6.41	107	6.00	4.45		
Total BTEX	26.4	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	
Chloride	1640	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
GRO C6-C10*	1300	50.0	10/23/2023	ND	220	110	200	1.73	QM-07
DRO >C10-C28*	12600	50.0	10/23/2023	ND	209	104	200	3.87	QM-07
EXT DRO >C28-C36	1980	50.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 149 % 48.2-134

Surrogate: 1-Chlorooctadecane 304 % 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 (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	
Toluene*	1.65	0.200	10/23/2023	ND	2.16	108	2.00	5.19	
Ethylbenzene*	8.36	0.200	10/23/2023	ND	2.22	111	2.00	3.28	
Total Xylenes*	16.6	0.600	10/23/2023	ND	6.41	107	6.00	4.45	
Total BTEX	26.6	1.20	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 157 % 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	288	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*	366	50.0	10/23/2023	ND	220	110	200	1.73	
DRO >C10-C28*	3020	50.0	10/23/2023	ND	209	104	200	3.87	
EXT DRO >C28-C36	587	50.0	10/23/2023	ND					

Surrogate: 1-Chlorooctane 129 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 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 (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	
Total Xylenes*	2.33	0.150	10/23/2023	ND	6.41	107	6.00	4.45	
Total BTEX	2.33	0.300	10/23/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 151 % 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	656	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*	68.8	10.0	10/23/2023	ND	220	110	200	1.73	
DRO >C10-C28*	832	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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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)

BTX 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 BTX	<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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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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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

BTX 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*	0.194	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 BTX	<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*	211	10.0	10/23/2023	ND	209	104	200	3.87	
EXT DRO >C28-C36	59.9	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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, 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*	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
 Reported: 10/25/2023
 Project Name: MCA - 151
 Project Number: 212C - MD - 03256
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 10/19/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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, 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*	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



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 - 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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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

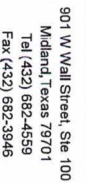
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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager

Tetra Tech, Inc.



(Circle or Specify Method No.)

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

Released to Imaging: 10/16/2024 9:24:25 AM

Tetra Tech, Inc.

(Circle or Specify Method No.)

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

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 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)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 BTX	<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

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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, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	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

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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, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	608	16.0	07/15/2024	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

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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 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, 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	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

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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-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, SM4500Cl-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

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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, SM4500Cl-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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BWL 10

ANALYSIS REQUEST

Company Name: Ensolum, LLC		P.O. #:		
Project Manager: Aimee Cole		Company: Ensolum, LLC		
Address: 3122 National Parks Hwy		Attn: Aimee Cole		
City: Carlsbad	State: NM Zip: 88220	Address:		
Phone #: (720) 384-7365	Fax #:	City:		
Project #: 03E2057102	Project Owner:	State:		
Project Name: MCA 151 Flowline Release		Zip:		
Project Location: 32.8081-103.7705		Phone #:		
Sampler Name: Mario Sarmas		Fax #:		

Lab I.D.	Sample I.D.	Depth (feet)	FOR LAB USE ONLY		DATE	TIME	ANALYSIS REQUEST									
			(G)RAB OR (C)OMP.	# CONTAINERS			MATRIX		PRESERV		SAMPLING					
							GROUNDWATER									
							WASTEWATER									
							SOIL									
							OIL									
							SLUDGE									
							OTHER :									
							ACID/BASE:									
							ICE / COOL									
							OTHER :									

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 7/18/24	Received By:	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:
Relinquished By:	Date: 7/18/24	Received By:	All Results are emailed. Please provide Email address:

Turnaround Time:	Standard	<input checked="" type="checkbox"/> Rush	Bacteria (only) Sample Condition
Thermometer ID #413	7.13 24		Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No
Correction Factor -0.5°C	4.14		Observed Temp. °C

Delivered By: (Circle One)	Observed Temp. °C	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	4.8	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	BP

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



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

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 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	
Toluene*	0.310	0.050	07/16/2024	ND	1.92	95.8	2.00	2.09	GC-NC1
Ethylbenzene*	1.04	0.050	07/16/2024	ND	1.96	98.0	2.00	0.826	
Total Xylenes*	2.57	0.150	07/16/2024	ND	5.77	96.2	6.00	0.655	
Total BTEx	3.92	0.300	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 213 % 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	3000	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
GRO C6-C10*	366	50.0	07/16/2024	ND	205	102	200	4.76	
DRO >C10-C28*	4560	50.0	07/16/2024	ND	196	98.2	200	2.44	
EXT DRO >C28-C36	656	50.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 162 % 48.2-134

Surrogate: 1-Chlorooctadecane 180 % 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: 07/15/2024
 Reported: 07/19/2024
 Project Name: MCA UNIT 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808,-103.7725

Sampling Date: 07/15/2024
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

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
Ethylbenzene*	2.04	0.050	07/16/2024	ND	1.96	98.0	2.00	0.826	
Total Xylenes*	0.759	0.150	07/16/2024	ND	5.77	96.2	6.00	0.655	
Total BTEX	2.80	0.300	07/16/2024	ND					

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

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/16/2024	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
GRO C6-C10*	393	50.0	07/16/2024	ND	205	102	200	4.76	
DRO >C10-C28*	9840	50.0	07/16/2024	ND	196	98.2	200	2.44	
EXT DRO >C28-C36	1870	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
 Reported: 07/19/2024
 Project Name: MCA UNIT 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808,-103.7725

Sampling Date: 07/15/2024
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

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
Ethylbenzene*	10.1	0.100	07/16/2024	ND	1.96	98.0	2.00	0.826	
Total Xylenes*	6.51	0.300	07/16/2024	ND	5.77	96.2	6.00	0.655	GC-NC1
Total BTEx	16.6	0.600	07/16/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 293 % 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	<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
GRO C6-C10*	1150	50.0	07/16/2024	ND	205	102	200	4.76	
DRO >C10-C28*	15300	50.0	07/16/2024	ND	196	98.2	200	2.44	
EXT DRO >C28-C36	2790	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		
Ethylbenzene*	0.089	0.050	07/16/2024	ND	1.96	98.0	2.00	0.826		
Total Xylenes*	0.151	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, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3120	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
GRO C6-C10*	19.7	10.0	07/16/2024	ND	205	102	200	4.76	
DRO >C10-C28*	844	10.0	07/16/2024	ND	196	98.2	200	2.44	
EXT DRO >C28-C36	145	10.0	07/16/2024	ND					

Surrogate: 1-Chlorooctane 117 % 48.2-134

Surrogate: 1-Chlorooctadecane 155 % 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.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/01/2024
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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

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: 08/01/2024
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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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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
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, 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	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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Analytical Results For:

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

Received: 08/01/2024
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, 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 59.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 56.4 % 49.1-148

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Analytical Results For:

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

Received: 08/01/2024
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	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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Analytical Results For:

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

Received: 08/01/2024
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, 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	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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Analytical Results For:

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

Received: 08/01/2024
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	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
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, 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	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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Analytical Results For:

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

Received: 08/01/2024
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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		
Ethylbenzene*	0.063	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, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	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*	876	10.0	08/05/2024	ND	185	92.6	200	9.71	
EXT DRO >C28-C36	215	10.0	08/05/2024	ND					

Surrogate: 1-Chlorooctane 77.9 % 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:

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

Received: 08/01/2024
 Reported: 08/07/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/01/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, SM4500Cl-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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Aimee Cole

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: (720) 384-7365

State: NM

Zip: 88220

Fax #:

Project #:

Project Name:

Project Location:

Sampler Name:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

BTEX

TPH

Chlorides

ANALYSIS REQUEST

P.O. #:

Company: Ensolum, LLC

Attn: Aimee Cole

Address:

City:

State:

Zip:

Phone #:



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

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 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

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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.

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,

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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:	08/14/2024	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



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

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC				BILL TO				ANALYSIS REQUEST																
Project Manager: Aimee Cole				P.O. #:																				
Address: 3122 National Parks Hwy				Company: Ensolum, LLC																				
City: Carlsbad				Attn: Aimee Cole																				
Phone #: (720) 384-7365				State: NM				Zip: 88220																
Project #: 03E2057102				Project Owner:																				
Project Name: MCA Unit 151 Flowline Release				City:																				
Project Location: 32.808, -103.7725				State:				Zip:																
Sample 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																
104494	F514	6			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME									
														8/14/24	0950									
<p>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.</p>																BTEX			TPH			Chlorides		
Relinquished By:				Date: 8/14/24				Received By:				Date: 8/14/24				Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:								
Reinquinished By:				Time: 1410				Received By:				Date: 8/14/24				All Results are emailed. Please provide Email address: acoley@ensolum.com, msorkis@ensolum.com								
Delivered By: (Circle One)				Observed Temp. °C: 34.1				Sample Condition: Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				CHECKED BY: (Initials) AD				Turnaround Time: 8/14/24 1400								
Sampler - UPS - Bus - Other:				Corrected Temp. °C: 28.0				Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No								Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/> 14-HR <input type="checkbox"/> 24-HR <input type="checkbox"/> 48-HR <input type="checkbox"/> 72-HR <input type="checkbox"/> 96-HR <input type="checkbox"/> 120-HR <input type="checkbox"/> 144-HR <input type="checkbox"/> 168-HR <input type="checkbox"/> 192-HR <input type="checkbox"/> 216-HR <input type="checkbox"/> 240-HR <input type="checkbox"/> 264-HR <input type="checkbox"/> 288-HR <input type="checkbox"/> 312-HR <input type="checkbox"/> 336-HR <input type="checkbox"/> 360-HR <input type="checkbox"/> 384-HR <input type="checkbox"/> 408-HR <input type="checkbox"/> 432-HR <input type="checkbox"/> 456-HR <input type="checkbox"/> 480-HR <input type="checkbox"/> 504-HR <input type="checkbox"/> 528-HR <input type="checkbox"/> 552-HR <input type="checkbox"/> 576-HR <input 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type="checkbox"/> 6384-HR <input type="checkbox"/> 6408-HR <input type="checkbox"/> 6432-HR <input type="checkbox"/> 6456-HR <input type="checkbox"/> 6480-HR <input type="checkbox"/> 6504-HR <input type="checkbox"/> 6528-HR <input type="checkbox"/> 6552-HR <input type="checkbox"/> 6576-HR <input type="checkbox"/> 6600-HR <input type="checkbox"/> 6624-HR <input type="checkbox"/> 6648-HR <input type="checkbox"/> 6672-HR <input type="checkbox"/> 6696-HR <input type="checkbox"/> 6720-HR <input type="checkbox"/> 6744-HR <input type="checkbox"/> 6768-HR <input type="checkbox"/> 6792-HR <input type="checkbox"/> 6816-HR <input type="checkbox"/> 6840-HR <input type="checkbox"/> 6864-HR <input type="checkbox"/> 6888-HR <input type="checkbox"/> 6912-HR <input type="checkbox"/> 6936-HR <input type="checkbox"/> 6960-HR <input type="checkbox"/> 6984-HR <input type="checkbox"/> 7008-HR <input type="checkbox"/> 7032-HR <input type="checkbox"/> 7056-HR <input type="checkbox"/> 7080-HR <input type="checkbox"/> 7104-HR <input type="checkbox"/> 7128-HR <input type="checkbox"/> 7152-HR <input type="checkbox"/> 7176-HR <input type="checkbox"/> 7200-HR <input type="checkbox"/> 7224-HR <input type="checkbox"/> 7248-HR <input type="checkbox"/> 7272-HR <input type="checkbox"/> 7296-HR <input type="checkbox"/> 7320-HR <input type="checkbox"/> 7344-HR <input type="checkbox"/> 7368-HR <input type="checkbox"/> 7392-HR <input type="checkbox"/> 7416-HR <input type="checkbox"/> 7440-HR <input type="checkbox"/> 7464-HR <input type="checkbox"/> 7488-HR <input type="checkbox"/> 7512-HR <input type="checkbox"/> 7536-HR <input type="checkbox"/> 7560-HR <input type="checkbox"/> 7584-HR <input type="checkbox"/> 7608-HR <input type="checkbox"/> 7632-HR <input type="checkbox"/> 7656-HR <input type="checkbox"/> 7680-HR <input type="checkbox"/> 7704-HR <input type="checkbox"/> 7728-HR <input type="checkbox"/> 7752-HR <input type="checkbox"/> 7776-HR <input type="checkbox"/> 7800-HR <input type="checkbox"/> 7824-HR <input type="checkbox"/> 7848-HR <input type="checkbox"/> 7872-HR <input type="checkbox"/> 7896-HR <input type="checkbox"/> 7920-HR <input type="checkbox"/> 7944-HR <input type="checkbox"/> 7968-HR <input type="checkbox"/> 7992-HR <input type="checkbox"/> 8016-HR <input type="checkbox"/> 8040-HR <input type="checkbox"/> 8064-HR <input type="checkbox"/> 8088-HR <input type="checkbox"/> 8112-HR <input type="checkbox"/> 8136-HR <input type="checkbox"/> 8160-HR <input type="checkbox"/> 8184-HR <input type="checkbox"/> 8208-HR <input type="checkbox"/> 8232-HR <input type="checkbox"/> 8256-HR <input type="checkbox"/> 8280-HR <input type="checkbox"/> 8304-HR <input type="checkbox"/> 8328-HR <input type="checkbox"/> 8352-HR <input type="checkbox"/> 8376-HR <input type="checkbox"/> 8400-HR <input type="checkbox"/> 8424-HR <input type="checkbox"/> 8448-HR <input type="checkbox"/> 8472-HR <input type="checkbox"/> 8496-HR <input type="checkbox"/> 8520-HR <input type="checkbox"/> 8544-HR <input type="checkbox"/> 8568-HR <input type="checkbox"/> 8592-HR <input type="checkbox"/> 8616-HR <input type="checkbox"/> 8640-HR <input type="checkbox"/> 8664-HR <input type="checkbox"/> 8688-HR <input type="checkbox"/> 8712-HR <input type="checkbox"/> 8736-HR <input type="checkbox"/> 8760-HR <input type="checkbox"/> 8784-HR <input type="checkbox"/> 8808-HR <input type="checkbox"/> 8832-HR <input type="checkbox"/> 8856-HR <input type="checkbox"/> 8880-HR <input type="checkbox"/> 8904-HR <input type="checkbox"/> 8928-HR <input type="checkbox"/> 8952-HR <input type="checkbox"/> 8976-HR <input type="checkbox"/> 9000-HR <input type="checkbox"/> 9024-HR <input type="checkbox"/> 9048-HR <input type="checkbox"/> 9072-HR <input type="checkbox"/> 9096-HR <input type="checkbox"/> 9120-HR <input type="checkbox"/> 9144-HR <input type="checkbox"/> 9168-HR <input type="checkbox"/> 9192-HR <input type="checkbox"/> 9216-HR <input type="checkbox"/> 9240-HR <input type="checkbox"/> 9264-HR <input type="checkbox"/> 9288-HR <input type="checkbox"/> 9312-HR <input type="checkbox"/> 9336-HR <input type="checkbox"/> 9360-HR <input type="checkbox"/> 9384-HR <input type="checkbox"/> 9408-HR <input type="checkbox"/> 9432-HR <input type="checkbox"/> 9456-HR <input type="checkbox"/> 9480-HR <input type="checkbox"/> 9504-HR <input type="checkbox"/> 9528-HR <input type="checkbox"/> 9552-HR <input type="checkbox"/> 9576-HR <input type="checkbox"/> 9600-HR <input type="checkbox"/> 9624-HR <input type="checkbox"/> 9648-HR <input type="checkbox"/> 9672-HR <input type="checkbox"/> 9696-HR <input type="checkbox"/> 9720-HR <input type="checkbox"/> 9744-HR <input type="checkbox"/> 9768-HR <input type="checkbox"/> 9792-HR <input type="checkbox"/> 9816-HR <input type="checkbox"/> 9840-HR <input type="checkbox"/> 9864-HR <input type="checkbox"/> 9888-HR <input type="checkbox"/> 9912-HR <input type="checkbox"/> 9936-HR <input type="checkbox"/> 9960-HR <input type="checkbox"/> 9984-HR <input type="checkbox"/> 10000-HR								

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 08/26/2024
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: FS 08 7 (H245180-01)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 BTX	<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



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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, 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 93.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, SM4500Cl-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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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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, SM4500Cl-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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, SM4500Cl-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



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Analytical Results For:

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

Received: 08/26/2024
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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

Cardinal Laboratories

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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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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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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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, SM4500Cl-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*	108	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	32.7	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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Analytical Results For:

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

Received: 08/26/2024
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, 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 95.6 % 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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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	
Benzene*	0.057	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: 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 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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, 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	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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Analytical Results For:

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

Received: 08/26/2024
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, 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*	20.4	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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Analytical Results For:

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

Received: 08/26/2024
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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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Analytical Results For:

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

Received: 08/26/2024
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	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*	581	10.0	08/27/2024	ND	188	94.1	200	6.39	
EXT DRO >C28-C36	152	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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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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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
 Reported: 08/30/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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, SM4500CI-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

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

Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

10/14/24

Bill 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:								
Phone #: (720) 384-7365		City:								
Fax #: 384-7365		State:								
Project #: 03E205710 2		Zip:								
Project Owner:		Project Name: MCA 15-1								
Project Location: 32,808, -103.7725		State:								
Sample Name: Mario Sarfakis		Phone #:								
Fax #:		PRESERV:								
FOR LAB USE ONLY		SAMPLING								
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	DATE	TIME	BTEX	TPH	Chlorides
HA4580	F508	7	C 1	1	✓	8/26/2004	1007	✓	✓	✓
	F509	7	C 1	1	✓	10/10	1014	✓	✓	✓
	F510	6	C 1	1	✓	10/14	1016	✓	✓	✓
	F511	7	C 1	1	✓	10/18	1031	✓	✓	✓
	F515	6	C 1	1	✓	1206	1207	✓	✓	✓
	F516	6	C 1	1	✓	1209		✓	✓	✓
	F517	6	C 1	1	✓			✓	✓	✓
	SW06	0-4	C 1	1	✓			✓	✓	✓
	SW07	0-4	C 1	1	✓			✓	✓	✓
	SW07	4-7	C 1	1	✓			✓	✓	✓

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Relinquished By:	Date: 8/26/24	Received By: Shoddeigney	Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date: 8/26/24	Received By: Shoddeigney	All Results are emailed. Please provide Email address:	
Relinquished By:	Date: 8/26/24	Received By: Shoddeigney	REMARKS: acole@ensolum.com/msarfakis@ensolum.com	

Delivered By: (Circle One)	Observed Temp.: 3.7°C	Sample Condition	CHECKED BY: (Initials)	Turnaround Time: Standard	Bacteria (only)	Sample Condition
Sampler - UPS - Bus - Other:	Corrected Temp.: 3.1°C	Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	SR	Thermometer ID: #113	Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	Observed Temp.: °C

FORM 000 R-3.2 10/07/21

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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC							BILL TO		ANALYSIS REQUEST													
Project Manager: Aimee Cole							P.O. #:															
Address: 3122 National Parks Hwy							Company: Ensolum, LLC															
City: Carlsbad							State: NM		Zip: 88220		Attn: Aimee Cole											
Phone #: (720) 384-7365							Fax #:		Address:													
Project #: 03E205710 2							Project Owner:		City:													
Project Name: MCA 151							State:		Zip:													
Project Location: 32.808, -103.7725							Phone #:															
Sampler Name: Mafio Sachis							Fax #:															
FOR LAB USE ONLY																						
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP. # CONTAINERS	MATRIX						PRESERV.	SAMPLING											
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME								
H245180	SW09	0-4	C 1	<input checked="" type="checkbox"/>									8/26/24	1213	BTEX	TPH	Chlorides					
11	SW09	4-7	C 1	<input checked="" type="checkbox"/>										1215	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
13	SW10	0-4	C 1	<input checked="" type="checkbox"/>										1218	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
14	SW10	4-6	C 1	<input checked="" type="checkbox"/>										1220	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
15	SW01	0-4	C 1	<input checked="" type="checkbox"/>										1222	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
110	SW01	4-7	C 1	<input checked="" type="checkbox"/>										1223	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					

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Relinquished By: _____		Date: 8/26/24	Received By: [Signature]
Relinquished By: _____		Date: 1539	Received By: [Signature]
Time: _____		Time: _____	

Verbal Result: ☐ Yes ☐ No Add'l Phone #: _____
All Results are emailed. Please provide Email address: acole@ensolum.com/msachis@ensolum.com

REMARKS: _____

Delivered By: (Circle One) Sampler - UPS Bus Other:	Observed Temp.: °C 37.0 Corrected Temp.: °C 3.12	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: [Signature] (Initials)	Turnaround Time: Thermometer ID #113 #140 Correction Factor: -0.56 -0.42	Standard Rush <input checked="" type="checkbox"/> Bacteria (only) Sample Condition <input type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	Corrected Temp.: °C
--	---	--	---------------------------------------	--	--	---------------------



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

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 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)

BTX 8021B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 BTX	<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

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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, SM4500Cl-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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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, SM4500Cl-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



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: 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, SM4500Cl-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



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: 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, SM4500Cl-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



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: 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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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, SM4500Cl-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

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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:	08/28/2024	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, 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	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



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
 Reported: 09/04/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 08/28/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

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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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

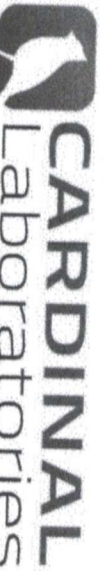
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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC
Project Manager: Aimee Cole

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: (720) 384-7365

State: NM Zip: 88220

Project #: 03E205702

Fax #:

Project Name: MCA 151

Project Location: 32.808, -103.7725

Sample Name: Mario Sakh's

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: Aimee Cole

Attn: Ensolum, LLC

Address:

City:

State: Zip:

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Depth (feet)

H245239

F-519

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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 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.

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

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

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

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

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

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
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

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

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

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**

Chloride	240		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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Cardinal Laboratories

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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:
18-Sep-24 10:27

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**

Chloride	144		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	

Surrogate: 4-Bromofluorobenzene (PID)			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	

Surrogate: 1-Chlorooctane			74.3 %		48.2-134	4082912	MS	29-Aug-24	8015B	
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Surrogate: 1-Chlorooctadecane			78.0 %		49.1-148	4082912	MS	29-Aug-24	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
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

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-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	

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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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

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 4083010 - 1:4 DI Water									
Blank (4083010-BLK1)				Prepared & Analyzed: 30-Aug-24					
Chloride	ND	16.0	mg/kg						
LCS (4083010-BS1)				Prepared & Analyzed: 30-Aug-24					
Chloride	416	16.0	mg/kg	400		104 80-120			
LCS Dup (4083010-BSD1)				Prepared & Analyzed: 30-Aug-24					
Chloride	432	16.0	mg/kg	400		108 80-120	3.77	20	

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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:
18-Sep-24 10:27

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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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

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**Blank (4082912-BLK1)**

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			

LCS (4082912-BS1)

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			

LCS Dup (4082912-BS1)

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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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC		P.O. #:		ANALYSIS REQUEST														
Project Manager: Aimee Cole																		
Address: 3122 National Parks Hwy		City: Carlsbad		State: NM		Zip: 88220												
Phone #: (720) 384-7365		Fax #:		Company: Ensolum, LLC		Attn: Aimee Cole												
Project #: 03E2057100		Project Owner:		Address:														
Project Name: MCA 151		City:		State:		Zip:												
Project Location: 32, 808, -103.7725		Phone #:		Fax #:														
Sampler Name: Mario Salinas		FOR LAB USE ONLY																
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	BTEX	TPH	Chlorides
H24526	F524	3	(C)	1										8/24/24	0926			
	F525	3	(C)	1											0931			
	SW189	0-3	(C)	1											0933			
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Relinquished By:		Date: 8/24/24		Received By:		Date: 8/24/24		Time: 11:30		Received By: [Signature]		Time:		<p>Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Add'l Phone #:</p> <p>All Results are emailed. Please provide Email address:</p>				
Relinquished By:		Date: 8/24/24		Received By:		Date: 8/24/24		Time: 11:30		Received By: [Signature]		Time:		<p>REMARKS: acole@ensolum.com / mario.salinas@ensolum.com</p> <p>*Customer requested ID changes.</p>				
Delivered By: (Circle One)		Observed Temp.: °C 65		Sample Condition		CHECKED BY: (Initials)		Turnaround Time: #140		Standard		Bacteria (only)		Sample Condition		Corrected Temp.: °C		
Sampler - UPS - Bus - Other:		Corrected Temp.: °C 59		Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/>		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Thermometer ID #1135		Rush <input type="checkbox"/>		Cool <input type="checkbox"/> Intact <input type="checkbox"/>		Observed Temp.: °C		Corrected Temp.: °C		

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

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

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.

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

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

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

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

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

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
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

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

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**

Chloride	528		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*	0.179		0.050	mg/kg	50	4090537	JH	06-Sep-24	8021B	GC-NC1
Ethylbenzene*	1.25		0.050	mg/kg	50	4090537	JH	06-Sep-24	8021B	GC-NC1
Total Xylenes*	3.13		0.150	mg/kg	50	4090537	JH	06-Sep-24	8021B	GC-NC1
Total BTEX	4.56		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

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	121		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	1390		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	242		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	

Surrogate: 1-Chlorooctane 109 % 48.2-134 4090608 MS 06-Sep-24 8015B

Surrogate: 1-Chlorooctadecane 115 % 49.1-148 4090608 MS 06-Sep-24 8015B

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
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

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**

Chloride	864		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*	0.263		0.050	mg/kg	50	4090607	JH	06-Sep-24	8021B	GC-NC1, QM-07
Total Xylenes*	0.731		0.150	mg/kg	50	4090607	JH	06-Sep-24	8021B	GC-NC1
Total BTEX	0.994		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

GRO C6-C10*	34.7		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	522		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	75.2		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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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

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-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>			99.9 %	71.5-134		4090607	JH	06-Sep-24	8021B	

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	
<i>Surrogate: 1-Chlorooctane</i>			107 %	48.2-134		4090608	MS	06-Sep-24	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			126 %	49.1-148		4090608	MS	06-Sep-24	8015B	

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
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

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**

Chloride	272		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	
Surrogate: 4-Bromofluorobenzene (PID)		99.9 %		71.5-134	4090607	JH	06-Sep-24	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0	10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
DRO >C10-C28*	178	10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	40.7	10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
Surrogate: 1-Chlorooctane		107 %		48.2-134	4090608	MS	06-Sep-24	8015B	
Surrogate: 1-Chlorooctadecane		131 %		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

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**

Chloride	240		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	

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*	21.7		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			97.6 %	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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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

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**

Chloride	208		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	

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*	97.0		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	31.0		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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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

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-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	

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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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

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**

Chloride	144		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	

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	
DRO >C10-C28*	568		10.0	mg/kg	1	4090608	MS	06-Sep-24	8015B	
EXT DRO >C28-C36	176		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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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

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-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	

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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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

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-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	

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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*=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

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-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	

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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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

Inorganic Compounds - Quality Control**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 4090626 - 1:4 DI Water									
Blank (4090626-BLK1)									
					Prepared: 06-Sep-24 Analyzed: 09-Sep-24				
Chloride	ND	16.0	mg/kg						
LCS (4090626-BS1)									
					Prepared: 06-Sep-24 Analyzed: 09-Sep-24				
Chloride	400	16.0	mg/kg	400	100	80-120			
LCS Dup (4090626-BSD1)									
					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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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

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**Blank (4090537-BLK1)**

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							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		95.3	71.5-134			

LCS (4090537-BS1)

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
Surrogate: 4-Bromofluorobenzene (PID)	0.0471		mg/kg	0.0500		94.2	71.5-134			

LCS Dup (4090537-BSD1)

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
Surrogate: 4-Bromofluorobenzene (PID)	0.0471		mg/kg	0.0500		94.1	71.5-134			

Batch 4090607 - Volatiles**Blank (4090607-BLK1)**

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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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

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, 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

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**Blank (4090608-BLK1)**

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			

LCS (4090608-BS1)

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			

LCS Dup (4090608-BSD1)

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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Celey D. Keene, Lab Director/Quality Manager

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

Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

79.

Company Name: Ensolum, LLC						P.O. #:		ANALYSIS REQUEST																																	
Project Manager: Aimee Cole																																									
Address: 3122 National Parks Hwy																																									
City: Carlsbad						State: NM Zip: 88220		Company: Ensolum, LLC																																	
Phone #: (720) 384-7365						Fax #:		Attn: Aimee Cole																																	
Project #: 03E2057102						Project Owner:		Address:																																	
Project Name: MCA 151						City:		State: Zip:																																	
Project Location: 3A.808,-103.7725						Phone #:		Fax #:																																	
Sample Name: Marcio Sarchis						Matrix		PRESERV		SAMPLING																															
FOR LAB USE ONLY						(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		BTEx		TPH		Chlorides					
Lab I.D.						Sample I.D.		Depth (feet)																																	
H245370						PS12		6		C		1		V		9/5/04		1025		✓		✓		✓																	
						FS30		6		C		1		V		1026		✓		✓		✓																			
						FS31		6		C		1		V		1029		✓		✓		✓																			
						FS24 FS32		5		C		1		V		1035		✓		✓		✓																			
						FS25 FS33		6		C		1		V		1036		✓		✓		✓																			
						FS26		6		C		1		V		1038		✓		✓		✓																			
						FS27		6		C		1		V		1040		✓		✓		✓																			
						FS28		5		C		1		V		1041		✓		✓		✓																			
						FS29		6		C		1		V		1043		✓		✓		✓																			
						SW16		0-6		C		1		V		1054		✓		✓		✓																			
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Relinquished By:						Date: 9/5/04		Received By: S. Rodriguez																																	
Relinquished By:						Time: 1437																																			
Delivered By: (Circle One) Sampler - UPS - Bus - Other:						Observed Temp.: °C Corrected Temp.: °C		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		CHECKED BY: (Initials) SK																															
						Turnaround Time: Standard Rush		<input checked="" type="checkbox"/>		Bacteria (only) Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																															
						Thermometer ID: #443		72-hr		Sample Condition Observed Temp.: °C Corrected Temp.: °C																															
						Corrosion Factor: .05°C																																			
REMARKS: * Customer requested ID changes. 70.9/6/1																																									
All Results are emailed. Please provide Email address: acole@ensolum.com/marcios@ensolum.com																																									
Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:																																									

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC						BULK TO		ANALYSIS REQUEST																			
Project Manager: Aimee Cole						P.O. #:																					
Address: 3122 National Parks Hwy						State: NM Zip: 88220		Company: ENSOLUM, LLC																			
City: Carlsbad						Attn: Aimee Cole																					
Phone #: (720) 384-7365						Fax #:		Address:																			
Project #: 03E20057102						Project Owner:		City:																			
Project Name: MCA 151						State:		Zip:																			
Project Location: 32.808, -103.7795						Phone #:																					
Sampler Name: MATO SAFKIS						Fax #:																					
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	TPH	Chlorides									
H245390	SWOG	0-4	C	1			V					V		4/12/14	21	V	V	V									
<p><i>[Handwritten signature across the grid]</i></p>																											
<p>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.</p>																											
Relinquished By:						Date: 4/5/14		Received By:																			
Time: 1437						Date: 4/5/14		Time: 1437																			
Relinquished By:						Date:		Received By:																			
Time:						Date:		Received By:																			
Delivered By: (Circle One)						Observed Temp.: °C 1.8		Sample Condition Cool Intact Yes No		CHECKED BY: (Initials)																	
Sampler - UPS - Bus - Other:						Corrected Temp.: °C 1.2		Cool Intact Yes No		88																	
Turnaround Time: Standard Rush 72-hr						Thermometer ID: #113		Bacteria (only) Sample Condition Cool Intact Yes No																			
Corrosion Factor: .05°C						All Results are emailed. Please provide Email address: acole@ensolum.com/msachris@ensolum.com		Verbal Result: Yes No Add'l Phone #:																			
REMARKS:																											



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

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 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	
Toluene*	0.089	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	
Chloride	1040	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

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: 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
Benzene*	1.29	0.500	09/10/2024	ND	1.79	89.4	2.00	3.56	GC-NC1
Toluene*	19.6	0.500	09/10/2024	ND	1.74	87.1	2.00	3.46	
Ethylbenzene*	25.8	0.500	09/10/2024	ND	1.77	88.3	2.00	4.01	
Total Xylenes*	46.5	1.50	09/10/2024	ND	5.28	88.0	6.00	4.37	
Total BTEX	93.3	3.00	09/10/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID) 140 % 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	4080	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
GRO C6-C10*	795	10.0	09/10/2024	ND	198	98.9	200	2.48	
DRO >C10-C28*	2690	10.0	09/10/2024	ND	178	88.8	200	12.9	
EXT DRO >C28-C36	396	10.0	09/10/2024	ND					

Surrogate: 1-Chlorooctane 159 % 48.2-134

Surrogate: 1-Chlorooctadecane 131 % 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:	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)

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	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*	0.051	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 BTX	<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	
Chloride	2600	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, SM4500Cl-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

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 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, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	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

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

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

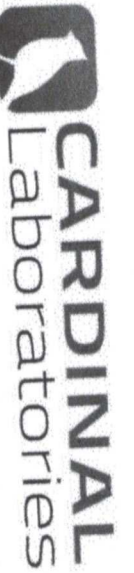
Cardinal Laboratories

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ANALYSIS REQUEST

Bill To

Company Name: Ensolum, LLC										P.O. #:		Company: Ensolum, LLC																																	
Project Manager: Aimee Cole										Attn: Aimee Cole		Address:																																	
Address: 3122 National Parks Hwy										State: NM Zip: 88220		City:																																	
City: Carlsbad										Fax #:		State: Zip:																																	
Phone #: (720) 384-7365										Project Owner:		Project Name: MCA 151																																	
Project Location: 32.808, -103.2725										Phone #:		Fax #:																																	
Sample Name: Mario Sarhis										Matrix:		Preserv:																																	
FOR LAB USE ONLY										SAMPLING																																			
Lab I.D.										Sample I.D.		Depth (feet)		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME		BTEx		TPH		Chlorides	
#245431										FS18		6.5		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
2										FS20		9		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
3										FS21		6.5		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
4										SW12		4-6.5		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
5										SW11		4-9		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
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:		Date: 9/9/24		Time: 1:39		Received By: [Signature]		Date: 9/9/24		Time: 1:39		Received By: [Signature]		Turnaround Time: Standard Rush		Thermometer ID #1134		Correction Factor -0.0		Bacteria (only) Sample Condition		Cool Intact		Corrected Temp. °C		Vertical Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS: aco@ensolum.com / msarhis@ensolum.com					
Relinquished By: [Signature]										Date: 9/9/24		Time: 1:39		Received By: [Signature]		Date: 9/9/24		Time: 1:39		Received By: [Signature]		Turnaround Time: Standard Rush		Thermometer ID #1134		Correction Factor -0.0		Bacteria (only) Sample Condition		Cool Intact		Corrected Temp. °C		Vertical Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS: aco@ensolum.com / msarhis@ensolum.com							
Delivered By: (Circle One)										Observed Temp. °C		Corrected Temp. °C		Sample Condition		CHECKED BY: (Initials)		Turnaround Time: Standard Rush		Thermometer ID #1134		Correction Factor -0.0		Bacteria (only) Sample Condition		Cool Intact		Corrected Temp. °C		Vertical Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS: aco@ensolum.com / msarhis@ensolum.com											
Sampler - UPS - Bus - Other:										Observed Temp. °C		Corrected Temp. °C		Sample Condition		CHECKED BY: (Initials)		Turnaround Time: Standard Rush		Thermometer ID #1134		Correction Factor -0.0		Bacteria (only) Sample Condition		Cool Intact		Corrected Temp. °C		Vertical Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS: aco@ensolum.com / msarhis@ensolum.com											

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



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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 09/12/2024
 Reported: 09/16/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 09/12/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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

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
 Reported: 09/16/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 09/12/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC										Bill To		ANALYSIS REQUEST																																																									
Project Manager: Aimee Cole										P.O. #:																																																											
Address: 3122 National Parks Hwy										Company: Ensolum, LLC																																																											
City: Carlsbad										Attn: Aimee Cole																																																											
State: NM Zip: 88220										Address:																																																											
Phone #: (720) 384-7365										City:																																																											
Project #: 03E2057102										State:																																																											
Project Name: MCA 151										Zip:																																																											
Project Location: 32,808, -103, 7725										Phone #:																																																											
Sampler Name: Mario Saffa's										Fax #:																																																											
FOR LAB USE ONLY										MATRIX		PRESERV		SAMPLING																																																							
Lab I.D.		Sample I.D.		Depth (feet)		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		BTEX		TPH		Chlorides																																	
H45546		FS20		9.5		C 1		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		9/12/24		1007		✓		✓		✓																																	
2		FS12		9.7		C 1		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		9/12/24		1009		✓		✓		✓																																	
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:										Received By:										Verbal Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #:																																																	
Date: 9/12/24										Time: 1310										All Results are emailed. Please provide Email address: aco1@ensolum.com / msaffa@ensolum.com																																																	
Relinquished By:										Received By: Skodriguey										REMARKS:																																																	
Date:										Time:																																																											
Delivered By: (Circle One)										Observed Temp.: °C										Sample Condition										CHECKED BY: (initials)										Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>										Bacteria (only) Sample Condition																			
Sampler - UPS - Bus - Other:										Corrected Temp.: °C										Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>										Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>										Thermometer ID #440-0.14										Cool Intact <input checked="" type="checkbox"/>										Observed Temp.: °C									
										4.92										4.92										Yes										48-H										Yes										Corrected Temp.: °C									

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



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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 09/12/2024
 Reported: 09/16/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 09/12/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

Sample ID: FS 34 13' (H245527-01)

BTX 8021B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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*	0.152	0.050	09/13/2024	ND	2.17	108	2.00	6.67	
Total Xylenes*	0.423	0.150	09/13/2024	ND	6.73	112	6.00	4.82	
Total BTX	0.575	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
Chloride	32.0	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*	29.7	10.0	09/13/2024	ND	221	111	200	0.924	
DRO >C10-C28*	1610	10.0	09/13/2024	ND	211	106	200	3.56	
EXT DRO >C28-C36	402	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 96.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 124 % 49.1-148

Cardinal Laboratories

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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
 Reported: 09/16/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 09/12/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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	
Chloride	32.0	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*	212	10.0	09/13/2024	ND	211	106	200	3.56	
EXT DRO >C28-C36	119	10.0	09/13/2024	ND					

Surrogate: 1-Chlorooctane 96.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 125 % 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.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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

Caley 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		P.O. #:		ANALYSIS REQUEST														
Project Manager: Aimee Cole		Company: ENSOLUM, LLC																
Address: 3122 National Parks Hwy		Attn: Aimee Cole																
City: Carlsbad		Address:																
Phone #: (720) 384-7365		City:																
Fax #: 384-7365		State:																
Project #: 03E2057102		Zip:																
Project Name: MCA 151		Phone #:																
Project Location: 32,808, -103,7725		Fax #:																
Sampler Name: Mario Sarker's		Matrix:																
FOR LAB USE ONLY		PRESERV:		SAMPLING														
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	BTEX	TPH	Chlorides
1845527	FS34	13	C1	1			✓					✓		4/12/24	1056	✓	✓	✓
2	SW18	8-13	C1	1			✓					✓		4/12/24	1104	✓		
APBS																		
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 service. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																		
Relinquished By:		Date: 4/12/24	Received By:		S. Rodriguez													
Relinquished By:		Date:	Received By:															
Time:		Time:																
Delivered By: (Circle One)		Observed Temp. °C: 4.92	Sample Condition	CHECKED BY: (initials)	Turnaround Time: #400-DUE													
Sampler - UPS - Bus - Other:		Corrected Temp. °C: 4.32	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Standard Rush <input checked="" type="checkbox"/> 48-hr <input type="checkbox"/> Bacteria (only) Sample Condition <input type="checkbox"/> Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Corrected Temp. °C													
FORM-006-R 3-2-2007/12-1		† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabnm.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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 09/12/2024
 Reported: 09/17/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 09/12/2024
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Shalyn Rodriguez

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



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
 Reported: 09/17/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 09/12/2024
 Sampling Type: Soil
 Sampling Condition: ** (See Notes)
 Sample Received By: Shalyn Rodriguez

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	
Chloride	48.0	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*	14.4	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

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Aimee Cole

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: (720) 384-7365

Project #: 03E2057102

Project Name: MCA 151

Project Location: 32.808, 103.7725

Sample Name: MCA 151

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

BTEX

TPH

Chlorides

Bill To

ANALYSIS REQUEST

P.O. #:

Company: Ensolum, LLC

Attn: Aimee Cole

Address:

City:

State: Zip:

Phone #:

Fax #:

PRESERV

SAMPLING

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. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:

Date: 9/18/24

Received By:

Relinquished By:

Date: 9/18/24

Received By:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C

Corrected Temp. °C

Sample Condition

Cool Intact

CHECKED BY:

(Initials)

Turnaround Time:

Thermometer ID

Standard

Rush

Bacteria (only) Sample Condition

Cool Intact

Observed Temp. °C

Corrected Temp. °C

REMARKS: ac01e@ensolum.com/mca151@ensolum.com

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

All Results are emailed. Please provide Email address:

REMARKS: ac01e@ensolum.com/mca151@ensolum.com

† 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.

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)

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 BTX	<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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC				BILL TO				ANALYSIS REQUEST			
Project Manager: Aimee Cole				P.O. #:							
Address: 3122 National Parks Hwy				Company: ENSOLUM, LLC							
City: Carlsbad				State: NM Zip: 88220				Attn: Aimee Cole			
Phone #: (720) 384-7365				Fax #:				Address:			
Project #: 03E2057102				Project Owner:				City:			
Project Name: MCA 151				State:				Zip:			
Project Location: 32.808, -103.7725				Phone #:							
Sampler Name: Mafio Sam's				Fax #:							
FOR LAB USE ONLY											
Lab I.D.		Sample I.D.		Depth (feet)		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX	
H245004		Backfill		—		G 1				GROUNDWATER	
										WASTEWATER	
										SOIL	
										OIL	
										SLUDGE	
										OTHER:	
										ACID/BASE:	
										ICE / COOL	
										OTHER:	
										DATE	
										TIME	
										BTEX	
										TPH	
										Chlorides	
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Relinquished By: [Signature]				Date: 9/13/24				Received By: [Signature]			
Time: 1:50				Date: 9/13/24				Received By: [Signature]			
Time:				Time:				Time:			
Delivered By: (Circle One) Sampler - UPS - Bus - Other:				Observed Temp. °C Corrected Temp. °C				Sample Condition Cool Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Checked BY: [Signature]				Turnaround Time: Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>				Bacteria (only) Sample Condition Cool Intact Yes <input type="checkbox"/> No <input type="checkbox"/>			
Thermometer ID #413				Correction Factor 0.5°C				Corrected Temp. °C			
REMARKS: ACOLE@ENSOLUM.COM / MSAKIS@ENSOLUM.COM											

† 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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 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

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: 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: 38,808-103,7725

Sampler Name: MATO 56613

State: NM

Fax #:

Project Owner:

City:

State:

Phone #:

Fax #:

Zip: 88220

Address:

City:

State:

Phone #:

Fax #:

P.O. #:

Company: ENSOLUM, LLC

Attn: Aimee Cole

Lab I.D. Sample I.D. Depth (feet)

HB45005 58-12 16

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

9/3/24

044

BTEX

TPH

Chlorides

FOR LAB USE ONLY

MATRIX

PRESERV

SAMPLING

Observed Temp. °C

Corrected Temp. °C

29.2

23.2

Sample Condition

Cool

Intact

Yes

No

CHECKED BY:

(Initials)

AD

Turnaround Time:

Standard

Rush

Yes

No

Bacteria (only)

Cool

Intact

Yes

No

Corrected Temp. °C

23.2

Relinquished By:

Date: 9/3/24

Time: 1:50

Received By: [Signature]

REMARKS:

all results are emailed. Please provide Email address: acole@ensolum.com/mark,js@ensolum.com

PLEASE NOTE: Liability and Damages. Cardanal'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 Cardanal within 30 days after completion of the applicable service. In no event shall Cardanal 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 Cardanal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Bill to

ANALYSIS REQUEST



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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

ENSOLUM
 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)

BTX 8021B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 BTX	<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



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 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, SM4500Cl-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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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, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	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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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 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

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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 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, SM4500Cl-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

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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, SM4500Cl-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

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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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A handwritten signature in black ink, appearing to read "C. D. Keene", written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC

Project Manager: Aimee Cole

Address: 3122 National Parks Hwy

City: Carlsbad

Phone #: (720) 384-7365

Project #: 03E2057103

Project Name: MCA 151

Project Location: 32.808, -103.7725

Sampler Name: MCA 151

FOR LAB USE ONLY

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: Ensolum, LLC

Attn: Aimee Cole

Address:

City:

State: Zip:

Phone #:

Fax #:

PRESERV:

SAMPLING

Lab I.D.

Sample I.D.

Depth (feet)

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER:

ACID/BASE:

ICE / COOL

OTHER:

DATE

TIME

BTEX

TPH

Chlorides

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	BTEX	TPH	Chlorides
1	SB-12	11	G	1										9/13/24	0916			
2	SB-12	14	G	1											1032			
3	SB-2	10	G	1											1107			
4	SB-2	14	G	1											1122			
5	SB-13	9	G	1											1752			
	SB-13	12	G	1											1313			

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Relinquished By:

Date: 9/13/24

Received By:

Date: 9/13/24

Received By:

Date: 9/13/24

Received By:

Date: 9/13/24

Received By:

Date: 9/13/24

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Date: 9/13/24



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 09/16/24 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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 09/16/2024
 Reported: 09/17/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 09/16/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Shalyn Rodriguez

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

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

Notes and Definitions

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

Cardinal Laboratories

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

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC							BILL TO							ANALYSIS REQUEST													
Project Manager: Aimee Cole																											
Address: 3122 National Parks Hwy														P.O. #:													
City: Carlsbad														Company: ENSOLUM, LLC													
State: NM Zip: 88220														Attn: AIMEE COLE													
Phone #: (720) 384-7365 Fax #:														Address:													
Project #: 03EQ057102 Project Owner:														City:													
Project Name: MCA 151														State: Zip:													
Project Location: 32.808, -103.7725														Phone #:													
Sampler Name: MARID SARKIS														Fax #:													
FOR LAB USE ONLY																											
Lab I.D.							Sample I.D.							Depth (feet)													
H45005 1							F534							14													
														(G)RAB OR (C)OMP.													
														# CONTAINERS													
														GROUNDWATER													
														WASTEWATER													
														SOIL													
														OIL													
														SLUDGE													
														OTHER :													
														ACID/BASE:													
														ICE / COOL							✓						
														OTHER :													
														DATE							TIME						
														9/16/24							1356						
MPS																											

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Relinquished By:				Date: 9/16/24				Received By:				Date: 9/16/24			
Relinquished By:								Received By:							
Delivered By: (Circle One)				Observed Temp.: °C 2.4				Cool Intact				SAMPLE CONDITION			
Sampler - UPS - Bus - Other:				Corrected Temp.: °C 1.8				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>			
REMARKS:				all results emailed. Please provide Email address: a.co@ensolum.com / msarkis@ensolum.com				Turnaround Time:				Standard <input type="checkbox"/> Rush <input checked="" type="checkbox"/>			
								Thermometer ID #443740				Bacteria (only)			
								Correction Factor -0.5°C -0.10				Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>			
												Sample Condition			
												Observed Temp.: °C			
												Corrected Temp.: °C			



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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 09/27/2024
 Reported: 10/03/2024
 Project Name: MCA 151 FLOWLINE RELEASE
 Project Number: 03E2057102
 Project Location: 32.808, -103.7725

Sampling Date: 09/27/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

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

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 - 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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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 0-0.5' (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, 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 89.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.6 % 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:	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

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "C. D. Keene", written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: 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: MCA151

Project Location: 38.808-103.7725

Sampler Name: Mario Salfin

FOR LAB USE ONLY

BILL TO		ANALYSIS REQUEST									
P.O. #:	Company:										
Attn:	Address:										
City:	State:	Zip:									
Phone #:											
Fax #:											

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME										
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :										
H245901																							
1	SB-17	0-0.5	G	1										9/27/24	1100								
2	SB-17	0.5-1.0	G	1											1101								
3	SB-18	0-0.5	G	1											1103								
4	SB-18	0.5-1.0	G	1											1105								

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Relinquished By:

Date: 9/27/24

Received By:

Time: 1:30

Date: 9/27/24

Relinquished By:

Date:

Received By:

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

All Results are emailed. Please provide Email address:

REMARKS: acole@ensolum.com/msarkisen@ensolum.com

Turnaround Time:

Standard Rush

Thermometer ID #445 #146

Correction Factor -0.5°C

Bacteria (only) Sample Condition

Observed Temp. °C

Corrected Temp. °C

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Observed Temp. °C

Corrected Temp. °C

Sample Condition

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush

Thermometer ID #445 #146

Bacteria (only) Sample Condition

Observed Temp. °C

Corrected Temp. °C

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

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

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

QUESTIONS

Action 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

Prerequisites	
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

Location of Release Source	
<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

Incident Details	
<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

Nature and Volume of Release	
<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.

District I

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

District II

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

District III

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

District IV

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

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

QUESTIONS, Page 2

Action 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

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

Initial Response

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

I hereby agree and sign off to the above statement	Name: Aimee Cole Email: acole@ensolum.com Date: 05/07/2024
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QUESTIONS, Page 3

Action 392403

QUESTIONS (continued)

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[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
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 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
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride	(EPA 300.0 or SM4500 Cl B)	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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Action 392403

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:	331199
	Action Number:	392403
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QUESTIONS

Remediation Plan (continued)	
<i>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.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	R360 ARTESIA LLC LANDFARM [FEEM0112340644]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	No
OR is the off-site disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
<i>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>	
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
<i>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.</i>	

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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:
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Action Type:	
[C-141] Reclamation Report C-141 (C-141-v-Reclamation)	

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	385206
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/23/2024
What was the (estimated) number of samples that were to be gathered	10
What was the sampling surface area in square feet	2000

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	13200
What was the total volume (cubic yards) remediated	4800
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	13200
What was the total volume (in cubic yards) reclaimed	4800
Summarize any additional remediation activities not included by answers (above)	Incident Number nAPP2420871904 was remediated in coordination with nAPP2328619341. Remediation activities were completed in accordance with the approved work plan.

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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Action 392403

QUESTIONS (continued)

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	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 reseedling commence(d)	10/04/2024

Summarize any additional reclamation activities not included by answers (above)	Reclamation activities are summarized in the attached Closure Request.
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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 reseedling 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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QUESTIONS, Page 8

Action 392403

QUESTIONS (continued)

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	Action Number: 392403
	Action Type: [C-141] Reclamation Report C-141 (C-141-v-Reclamation)

QUESTIONS

Revegetation Report	
<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

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[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 reseeding activities, inspections, and final pictures when revegetation is achieved.	10/16/2024