



July 12, 2024

District Supervisor
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

**Re: Revised Assessment, Remediation, and Closure Report
Maverick Permian, LLC
MCA 254 Flowline Release
Unit Letter O, Section 28, Township 17 South, Range 32 East
Lea County, New Mexico
Incident ID# nAPP2302035947**

Dear Sir or Madam,

Tetra Tech, Inc. (Tetra Tech) was contracted by Maverick Permian, LLC (Maverick) to complete the Site characterization, assessment, and remediation of a release that occurred at the Maljamar Cooperative Agreement (MCA) 254 well pad, located in Unit Letter O, Section 28, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The release occurred at coordinates 32.800678°, -103.769520°, as shown in **Figure 1** and **Figure 2**.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report, the release was discovered on January 2, 2023. The C-141 reports that the release occurred from a flowline failure leading to a 6-barrel (bbl) release of produced water on- and off-pad. No fluids were recovered during the initial response due to sandy soil in the release area. The NMOCD received the Initial C-141 on January 20, 2023, and subsequently assigned the release Incident ID nAPP2302035947. The release extent is shown in **Figure 3** and the initial C-141 Release Notification form is available from the NMOCD epermitting portal under Incident ID nAPP2302035947.

SITE CHARACTERIZATION

Tetra Tech performed a Site characterization that included the identification of sensitive receptors, a depth to groundwater determination, and assessment of site soils. Site Characterization data are included in **Attachment 1**.

Receptors

Tetra Tech performed a site characterization for the release location and did not identify any watercourses, sinkholes, playas, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains within the distances specified in 19.15.29.11 New Mexico Administrative Code (NMAC). Based on a review of the NMOCD Mapper, the site is in an area of low karst potential.

Soils

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), the Site is mapped as having Maljamar and Palomas Fine Sands, 0 to 3 Percent Slopes, which is classified as a sandy soil with a published soil profile of fine sand from surface to 2 feet bgs, sandy clay loam from 2 to 4 feet bgs, and cemented material from 4 to 5 feet bgs.

Tetra Tech, Inc.

1500 CityWest Boulevard, Suite 1000, Houston, Texas 77042
Tel +1.832.251.5160 | tetrattech.com/oga | tetrattech.com

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Depth to Groundwater

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are 13 water wells located within an 800-meter (approximately ½-mile) radius of the release location. These 13 wells are variously listed as Active, Pending, or Plugged, however, all 13 of these wells are groundwater monitoring wells (MW-1 through MW-13) associated with the MCA 357 groundwater abatement site under Administrative/environmental Order 1RP-3025 associated with release incident nTO1423043689.

MCA 357 groundwater monitoring wells MW-3, MW-4, and MW-9 are the nearest monitoring wells to the release location approximately 360 feet upgradient to the north, 490 feet cross gradient to the west, and 960 feet downgradient to the south-southeast, respectively, as shown in figures provided in **Attachment 1**. Based on interpolated groundwater measurements reported in the MCA 357 2022 Annual Report by Tetra Tech, dated January 27, 2023, and ground surface survey data, groundwater at the site is approximately 91 feet below ground surface (bgs).

The MCA 254 release and remediation site lies at the center of the MCA 357 chloride groundwater plume. Groundwater chloride concentrations from the three nearest monitoring wells MW-3, MW-4, and MW-9 were 3,870 mg/L, 6,370 mg/L, and 6,700 mg/L, respectively. Based on available groundwater data, the groundwater chloride concentration beneath the MCA 254 release site is estimated at approximately 4,000 mg/L.

Select figures and tables from the MCA 357 2022 Annual Report and survey data are provided in **Attachment 1**. The full MCA 357 2022 Annual Report is available from the NMOCD Permitting online under incident nTO1423043689.

REGULATORY FRAMEWORK

Based upon the release footprint location and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chloride in soil.

Based on the site characterization and in accordance with Table I of 19.15.29.12 NMAC, the remediation RRALs for the Site for groundwater between 51 and 100 feet bgs are as follows:

Closure Criteria for Soils Impacted by a Release

Constituent	Remediation RRAL
Chloride	10,000 mg/kg
TPH (GRO+DRO+ORO)	2,500 mg/kg
TPH (DRO+ORO)	1,000 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

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Additionally, in accordance with the NMOCD guidance *Procedures for Implementation of the Spill Rule* (19.15.29 NMAC), the following reclamation requirements for surface soils (0-4 feet bgs) outside of active oil and gas operations are as follows:

Reclamation Requirements

Constituent	Remediation RRAL
Chloride	600 mg/kg
TPH (GRO+DRO+ORO)	100 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

INITIAL RESPONSE ACTIVITIES

The release occurred due to a hole in a poly flowline resulting in the release. The release flowed onto the well pad, then south into open pastureland adjacent to the MCA 254 well pad before it ran into the lease road to the south of the well pad where it flowed west along the lease road. Approximately 19,000 square foot area was impacted by the flowline release. According to site records, no fluids were recoverable during initial response activities undertaken by Maverick. The approximate release area is shown in **Figure 3**.

ENSOLUM SITE ASSESSMENT SUMMARY

Between March 22 and 27, 2023, personnel from Ensolum completed a Site visit to evaluate the release extent. Ensolum collected 19 preliminary surface soil samples. Reportedly preliminary soil samples were field screened for Volatile Organic Compounds (VOCs) with a photoionization detector (PID) and chloride with Hach® chloride QuanTab® test strips. Ensolum mapped the release extent and preliminary surface soil sampling locations with a handheld global positioning system (GPS).

The preliminary surface soil samples were collected from the upper 6 inches to depths of up to 3 feet bgs. Ensolum submitted samples to Eurofins Laboratories (Eurofins) in Midland, Texas for analysis of Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Oil Range Organics (ORO) by EPA Method 8015M, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, and chloride by EPA Method 300.00.

Ensolum's preliminary surface soil samples BH02A, BH03C, BH04A, BH07A, and BH07C reported chloride at concentrations greater than NMOCD Reclamation Requirements and BH04A, BH06A, and BH06C reported Total TPH concentrations as greater than NMOCD Reclamation Requirements. **Figure 3** presents Ensolum assessment sampling locations, **Table 1** presents a summary of the Ensolum laboratory analytical results, and **Attachment 2** presents Ensolum boring logs.

TETRA TECH SITE ASSESSMENT SUMMARY

On September 5, 2023, Tetra Tech identified the highest concentration of chlorides in soil from the base of the remediation excavation at 5,920 mg/kg in sample FS-5 (4.0) collected from 4.0-4.5 feet bgs. The chloride concentration is below Table I Closure Criteria, but greater than chloride Reclamation requirements of 600 mg/kg, indicating the release had not been vertically delineated as required by 19.15.29.11 NMAC. On September 15, 2023, Tetra Tech oversaw Test Pitting by McNabb Partners, LLC (McNabb) from the base of the remediation

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excavation from 4 feet bgs to 9 feet bgs where Tetra Tech collected sample FS-5 (8.0') which reported a chloride concentration of 2,920 mg/L.

On October 26, 2023, Tetra Tech and Standard Safety and Supply (Standard) mobilized to the Site with an air rotary drilling rig to install a deep soil boring at AH-5 in an attempt to complete vertical delineation of the release extent to Reclamation Requirements for chloride and TPH. Tetra Tech installed one deep soil boring at FS – 5 to a depth of 40 feet bgs and collected five (5) soil samples from depths ranging from 10 to 30 feet bgs. Submitted samples delineated TPH below 100 mg/kg in the sample collected from 10 to 11 feet bgs at FS – 5. Submitted samples reported concentrations indicating chloride concentrations remain somewhat consistent with depth below 4 feet bgs up to 30 feet bgs ranging from 3,520 mg/kg to 2,040 mg/kg as shown in **Table 3**. The soil boring log is provided in **Attachment 2**.

Vertical delineation of chloride impacts was not achieved during the advancement and sampling of boring FS-5. Based on the sandy lithology observed in soil boring FS-5 and the fairly consistent chloride concentrations in the deeper horizons, it is possible that chloride impacts to soil at concentrations greater than 600 mg/kg extend down to near the saturated zone. As groundwater at the Site is already known to be impacted at a concentration of approximately 4,000 mg/kg, greater than soil chloride concentrations remaining in the soil horizon above (3,520 mg/kg) or less, delineation of the deeper soil impacts to chloride Reclamation Requirements would not provide any additional useful characterization of the release as its potential impact on fresh water, public health, and the environment would be less than the existing MCA 357 groundwater impacts subject to groundwater abatement.

REMEDICATION AND CONFIRMATION SAMPLING

Maverick engaged Tetra Tech to take over remediation activities from Ensolum on August 23, 2023. Based on the Ensolum soil assessment results and the Tetra Tech screening of the release area, excavation activities commenced on August 31, 2023, and concluded on September 30, 2023. Maverick's subcontractor, McNabb used heavy equipment to excavate impacted soil from the remediation areas to maximum depths of 2, 3, and 4 feet below the surrounding ground surface as shown in **Figure 4**. To avoid potential contact by heavy equipment with pressurized lines within the remediation area, heavy equipment was maintained at a distance of at least 2 feet from pressurized lines where hydro-excavation and hand-digging were employed.

McNabb excavated a total of 3,204 cubic yards of contaminated soil from an approximately 19,000-square-foot area and transported the soil to R360 for offsite disposal. McNabb sourced 2,946 cubic yards of topsoil from the Rancher Pit to backfill the excavated areas and 300 cubic yards of caliche to restore the MCA 254 well pad surface.

Upon reaching the final lateral and vertical excavation extents of the excavation, Tetra Tech collected 80 confirmation samples on an approximate 200 square-foot basis, including 44 floor samples and 36 side wall samples from the excavated areas. Confirmation samples were submitted to Cardinal Laboratory in Hobbs, New Mexico for analysis of BTEX (8021B), chloride (SM4500 CL-B), and TPH (TPH 8015M). Laboratory analytical results for submitted confirmation samples reported concentrations of BTEX, TPH, and chloride as less than respective Reclamation Requirements for samples collected from depths above 4 feet bgs. For all samples obtained at or below a depth of 4 feet bgs, laboratory analytical results reported constituent concentrations as less than RRALs, and clean margins were demonstrated. Confirmation sampling locations and excavation extents are shown in **Figure 5** and **Figure 6**.

On September 19, 2023, Tetra Tech notified the NMOCD via email of final confirmation sampling in accordance with 19.15.29.12(D)(1)(a) NMAC. Between September 25 and October 12, 2023, subsequent to the receipt of confirmation sample results, McNabb completed backfilling of the excavated areas with clean soil. Confirmation sampling laboratory analytical results screened against Reclamation Requirements and RRALs are summarized in **Table 2** and **Table 3** and laboratory analytical data packages including chain of custody documentation are included

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in **Attachment 3**. Photographic Documentation showing the excavated areas and final grading after backfilling is provided in **Attachment 4**.

The backfilled areas for the on-pad release location have been graded and restored with a caliche pad base and backfilled areas of impacted pastureland have been graded with topsoil and seeded with New Mexico State Land Office (NMSLO) Sandy (S) Sites Seed Mixture in accordance with the Site soil profile detailed above in the Site Characterization Section, to aid in vegetation growth to complete reclamation. The seed mixture applied to the remediation Site is provided in **Attachment 5**.

NMOCD CLOSURE DENIAL

On February 22, 2024, the NMOCD rejected the initial Assessment, Remediation, and Closure Report dated November 16, 2023. This section responds to relevant NMOCD comments to provide clarification, further detail, and/or actions taken by Maverick where appropriate in response to NMOCD comments. To provide clarity, the NMOCD rejection comments are reiterated below along with Maverick's response.

"The responsible party must verbally notify the appropriate division district office two business days prior to conducting final sampling." This was not submitted with your remediation closure report nor emailed to OCD when requested, therefore these samples will not be accepted for closure."

Tetra Tech and Maverick understand that failure to notify the NMOCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted. Tetra Tech failed to notify the NMOCD of confirmation sampling two business days in advance in accordance with 19.15.29.12.D.(1).(a). Tetra Tech prepared an Alternative Confirmation Sampling Plan presented below that was submitted to the NMOCD and approved on June 17, 2024.

"Before recollecting confirmation samples, a C-141N must be submitted via epermitting at least two business days prior to collecting samples."

Tetra Tech acknowledges the requirement to submit a C-141N via epermitting at least two business days prior to collecting samples.

"The requested variance is not needed as part ii of 19.15.29.11(A)5(c) NMAC did not apply to this release; the initial C-141 stated there were 6 bbl of produced water released. Resubmit closure report to OCD by April 22, 2024."

The Variance Request from this Revised Assessment, Remediation, and Closure Report.

ALTERNATIVE CONFIRMATION SAMPLING PLAN

To address the NMOCD Closure Denial comments, Tetra Tech proposed an Alternative Confirmation Sampling Plan in accordance with 19.15.29.12(D)(1)(b) NMAC. The Alternative Confirmation Plan included the collection of an additional 20 grab base samples on an approximate 1,000 square foot basis with the appropriate NMOCD confirmation sampling notification via submission of C-141N. Tetra Tech proposed to collect the additional confirmation samples with a hand auger fitted with a 5-foot rod to hand auger to beyond the interface between the remediation backfill material and the underlying native soils to collect grab samples from the native underlying material and validate the previously collected confirmation samples. On June 17, 2024, The NMOCD approved the Alternative Confirmation Plan to rectify the failure to submit sampling notices to the NMOCD.

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ADDITIONAL CONFIRMATION SAMPLING

Additional Sampling Notification

In accordance with the NMOCD Alternative Confirmation Sampling Plan Approval, Tetra Tech submitted the Additional Confirmation Sampling C-141N Notification of Sampling Application to the NMOCD via permitting on June 18, 2024, for sampling to begin on June 24, 2024, at 9:00 am. Tetra Tech submitted subsequent sampling notification updates via C-141N submissions to update sampling dates and times as delays in sampling were experienced due to the need to respond to a new release in the area for Maverick on June 24, 2024, and delays in advancing sample locations due to compacted backfill caliche overlying the on-pad additional sampling locations.

Additional Sampling Activities

Tetra Tech mobilized to the Site and began collecting additional confirmation samples on June 24, 2024, at 9:00 am. Sampling was initially anticipated to be completed in one day on June 24, 2024, however, due to the aforementioned delays, Tetra Tech returned to the Site June 24, 26, and 27, 2024 to complete sampling. Tetra Tech collected 20 additional grab confirmation samples of native material at depths equivalent to the former excavation base at the NMOCD-approved locations. Additional samples were submitted to Cardinal Laboratory in Hobbs, New Mexico for analysis of TPH, BTEX, and chloride. Photographs of additional sampling activities are provided in **Attachment 4** and additional sampling locations and the previous excavation extents are shown in **Figure 7**.

Additional Sampling Results

Laboratory analytical results for additional samples reported concentrations of TPH, BTEX, and chloride as less than respective Reclamation Requirements for samples collected from depths less than 4 feet bgs. For all samples obtained at or below a depth of 4 feet bgs, laboratory analytical results reported constituent concentrations as less than RRALs, and initial confirmation sampling results were validated. Additional sample locations are designated with sample names beginning with "RS" and laboratory analytical results screened against Reclamation Requirements or RRALs, as appropriate, are provided in **Table 2** and **Table 3**, respectively.

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CONCLUSION

Based on the results of the confirmation sampling, the impacted soil within the release footprint with chloride concentrations greater than Reclamation Requirements and/or RRALs has been removed and properly disposed of offsite and the excavated area has been backfilled with clean material, graded, and seeded with BLM approved seed mixture where not on an active oil and gas facility pad; therefore, Site remediation is complete. Reclamation and revegetation will be completed at the end of life of the facility. If you have any questions concerning the remediation activities for the Site, please contact Charles Terhune by email at Charles.Terhune@tetrattech.com or by phone at (832) 252-2093.

Sincerely,



Chris Straub
Project Manager
Tetra Tech, Inc.



Charles H. Terhune IV, P.G.
Program Manager
Tetra Tech, Inc.

cc: Bryce Wagoner, Maverick Permian, LLC
Bureau of Land Management

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LIST OF ATTACHMENTS

Figures

- Figure 1 – Overview Map
- Figure 2 – Topographic Map
- Figure 3 – Approximate Release Extent and Ensolum Site Assessment Map
- Figure 4 – Remediation Excavation Extents
- Figure 5 – Well Pad & Pasture Confirmation Sample Locations
- Figure 6 – Lease Road Confirmation Sample Locations
- Figure 7 – Additional Sampling Locations

Tables

- Table 1 – Summary of Soil Analytical Results – Ensolum Assessment Sampling
- Table 2 – Summary of Shallow Soil Analytical Results – Confirmation Sampling
- Table 3 – Summary of Deep Soil Analytical Results – Confirmation Sampling

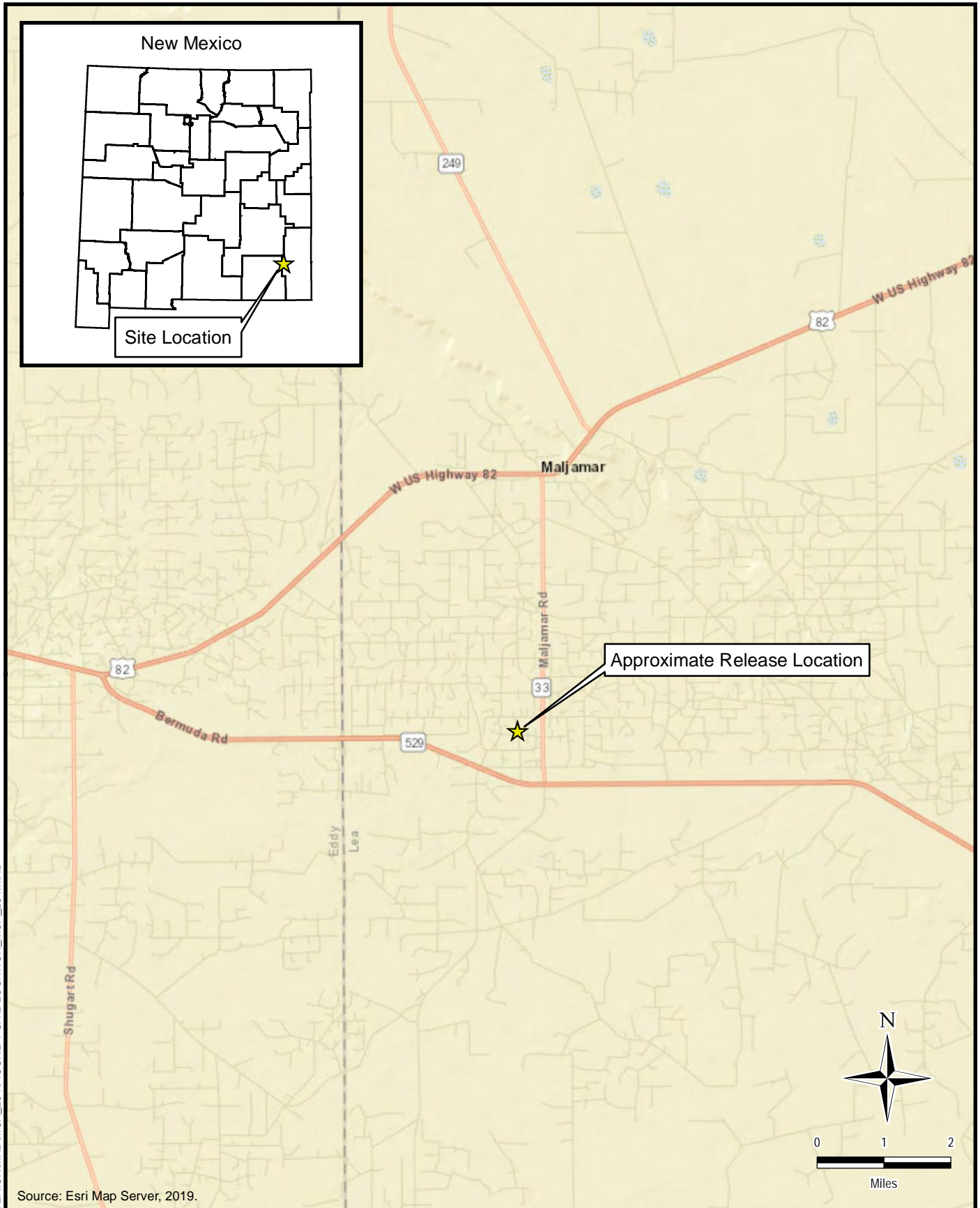
Attachments

- Attachment 1 – Site Characterization Data
- Attachment 2 – Boring Logs
- Attachment 3 – Laboratory Analytical Data
- Attachment 4 – Photographic Documentation
- Attachment 5 – Seed Mixture Details

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FIGURES



DOCUMENT PATH: D:\MAVERICK\WMD\MCA_254\FIGURE 1 SITE LOCATION_MCA_254.MXD

Source: Esri Map Server, 2019.



TETRA TECH

www.tetrattech.com

1500 CityWest Boulevard, Suite 1000
Houston, Texas 77042
Phone: (832) 281-5160
Fax: (832) 282-5170

MAVERICK NATURAL RESOURCES

NAPP2302035947
(32.800678°, -103.769520°)
LEA COUNTY, NEW MEXICO

**MCA 254 FLOWLINE RELEASE
SITE LOCATION MAP**

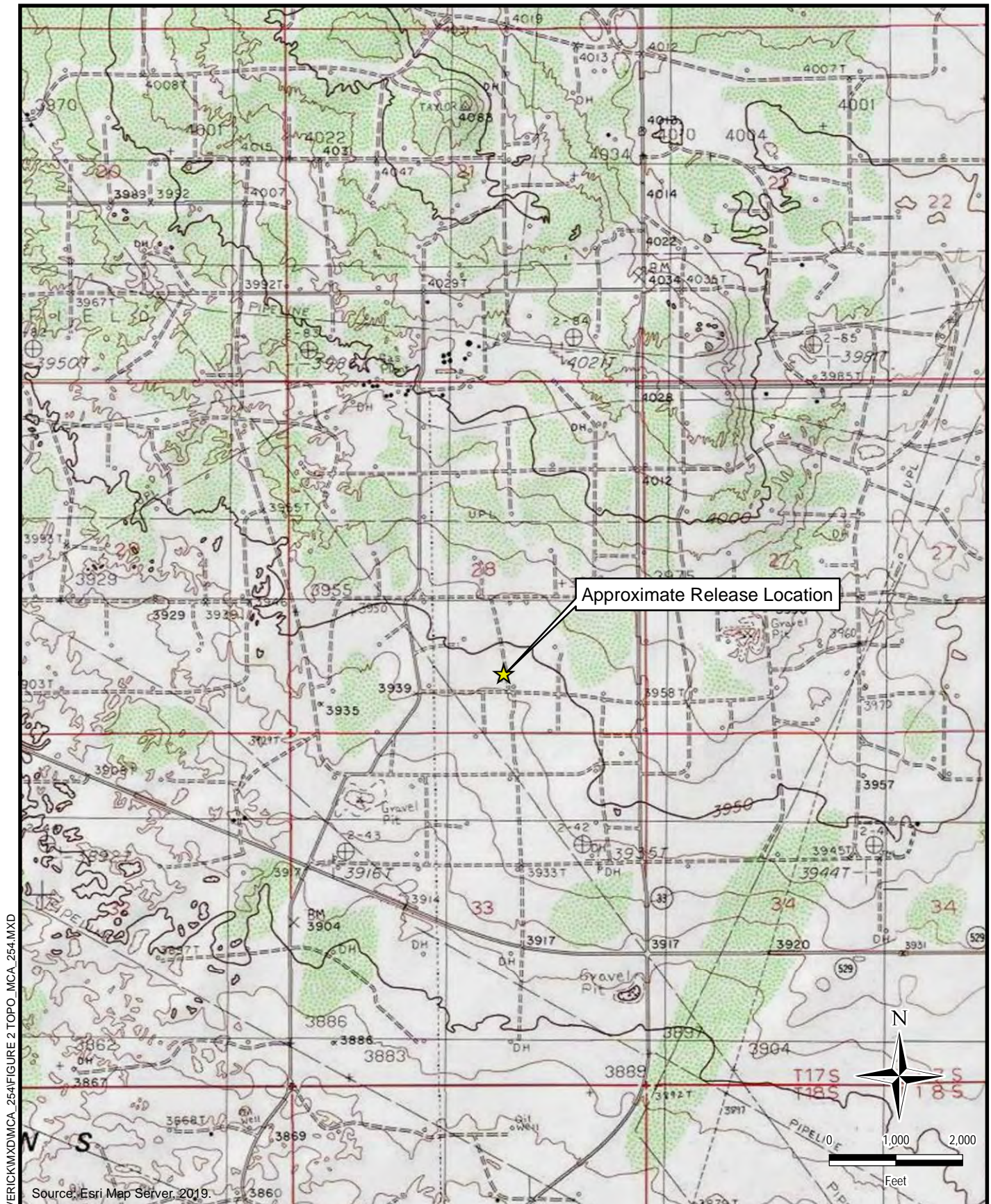
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DATE: NOVEMBER 15, 2023

DESIGNED BY: AAM

Figure No.

1



DOCUMENT PATH: D:\MAVERICK\WDMCA_254\FIGURE 2 TOPO_MCA_254.MXD


TETRA TECH
www.tetrattech.com

 1500 CityWest Boulevard, Suite 1000
 Houston, Texas 77042
 Phone: (832) 281-5160
 Fax: (832) 282-5170

MAVERICK NATURAL RESOURCES

 NAPP2302035947
 (32.800678°, -103.769520°)
 LEA COUNTY, NEW MEXICO

**MCA 254 FLOWLINE RELEASE
TOPOGRAPHIC MAP**

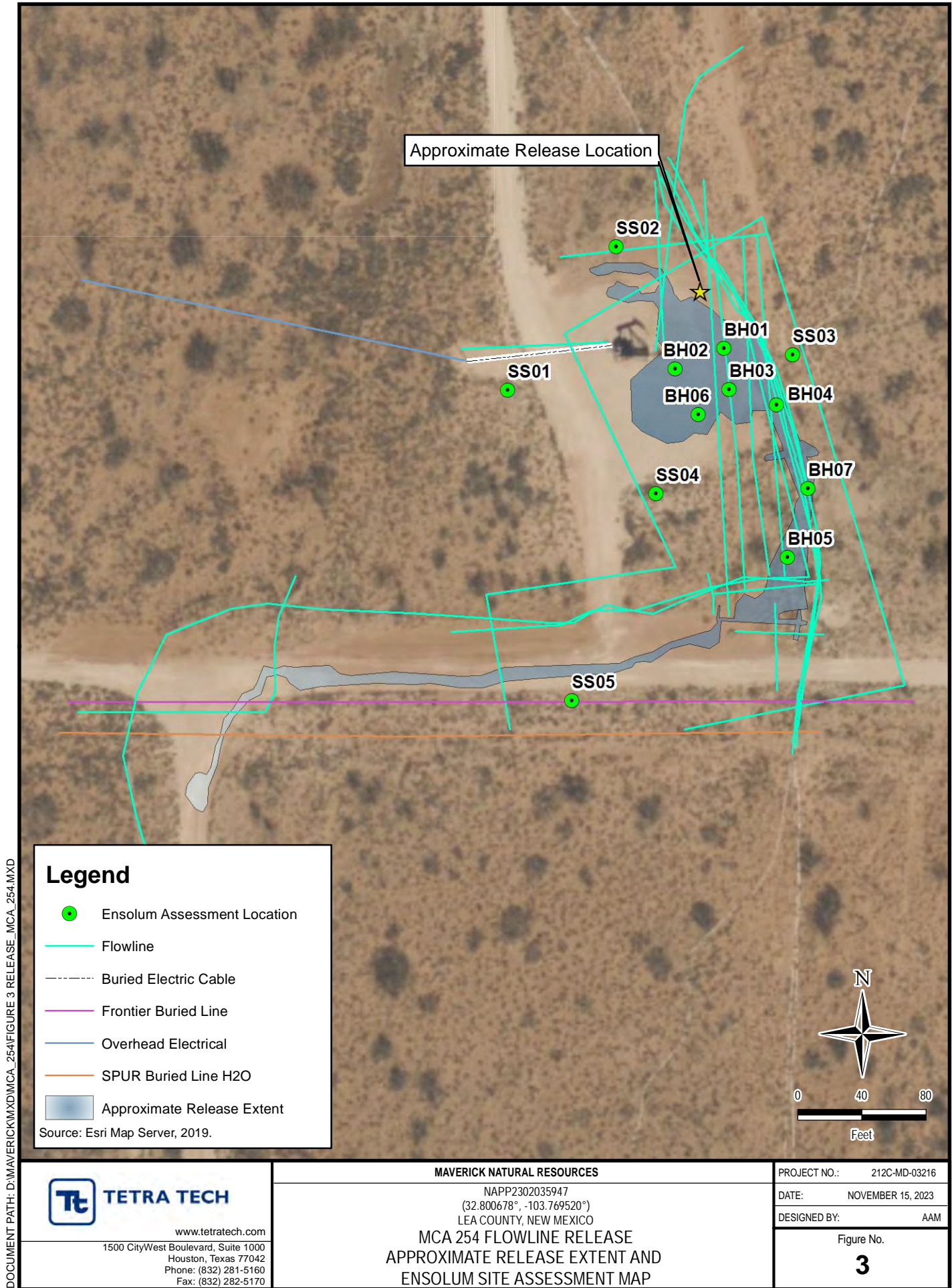
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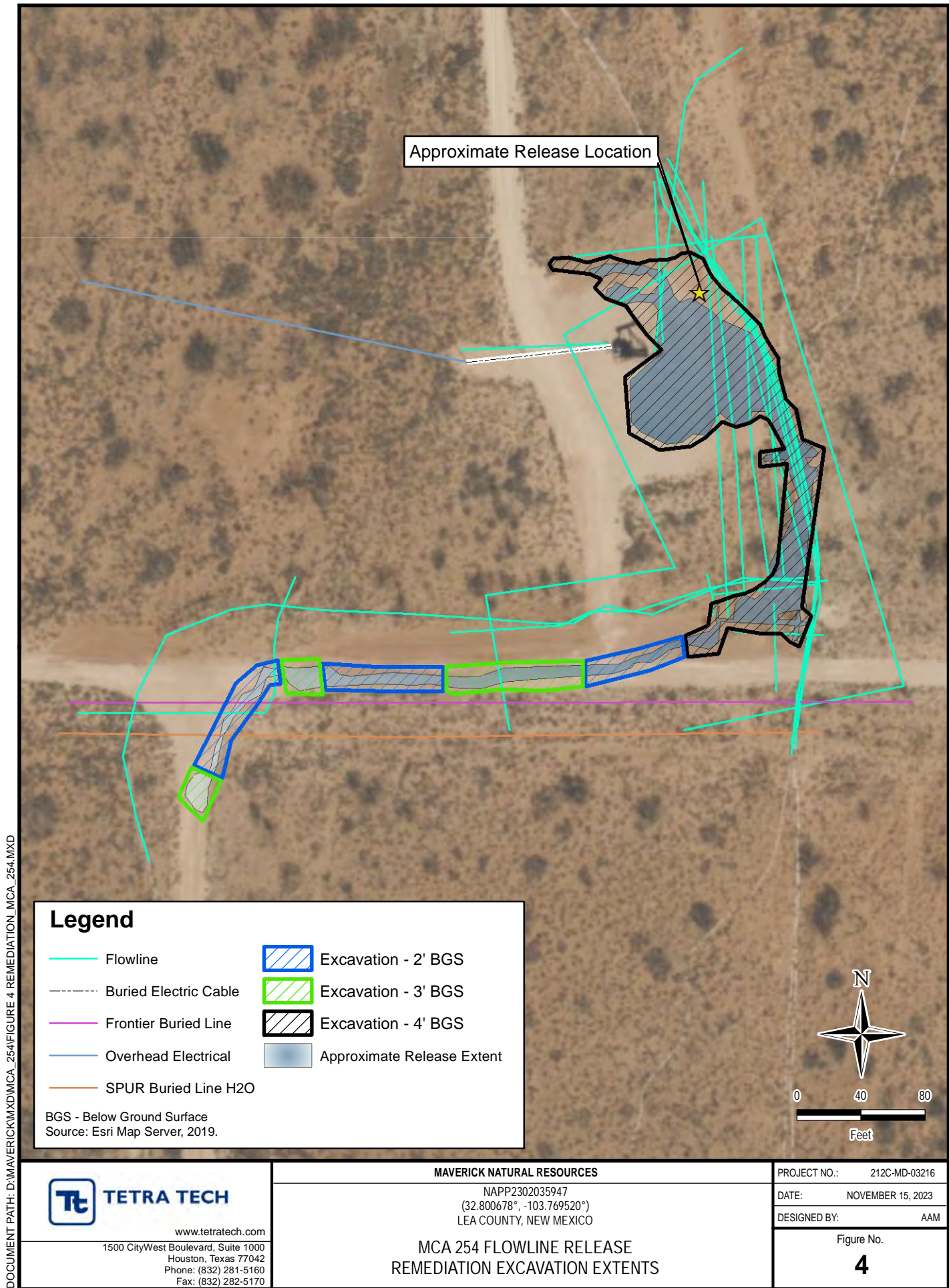
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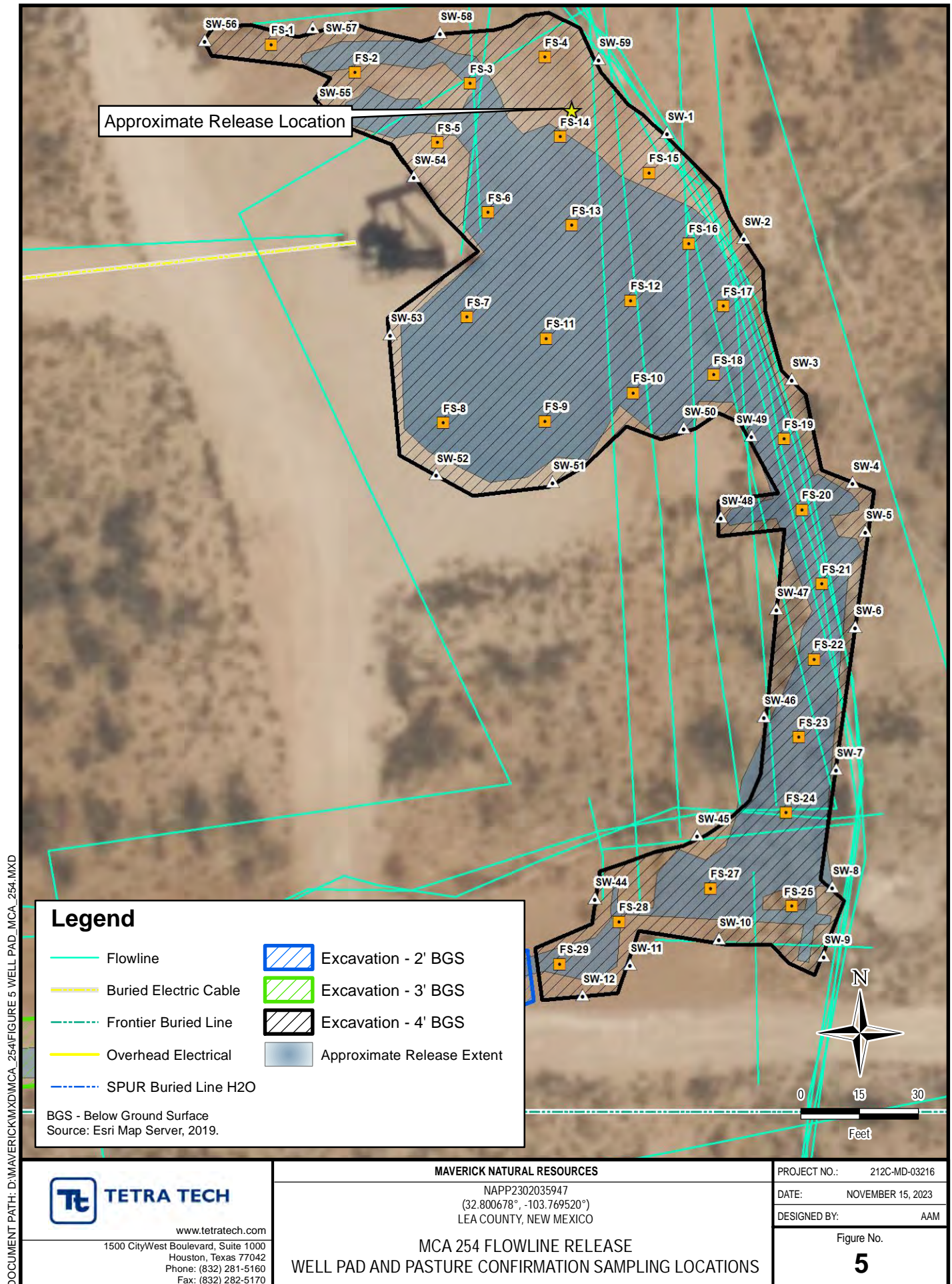
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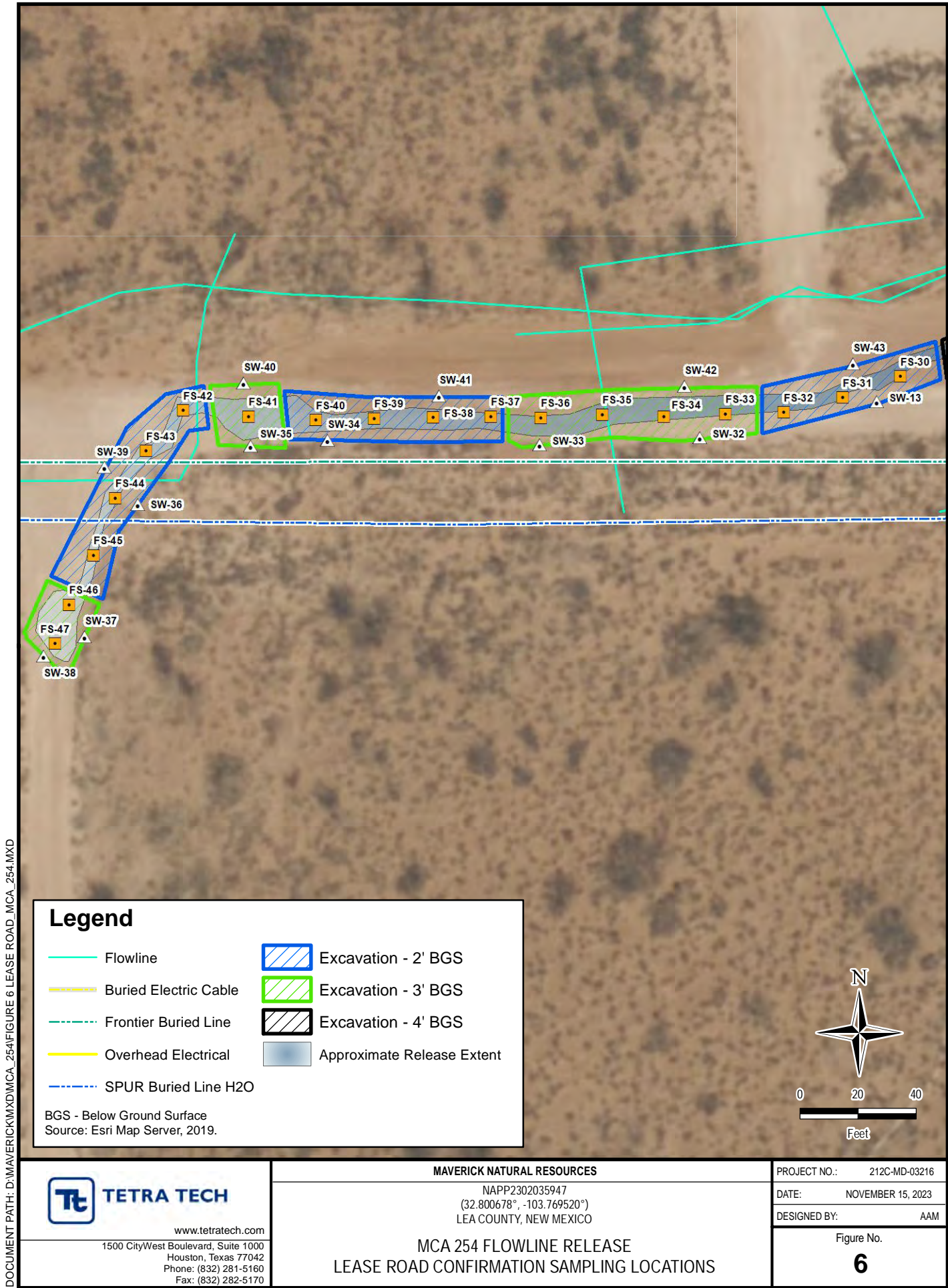
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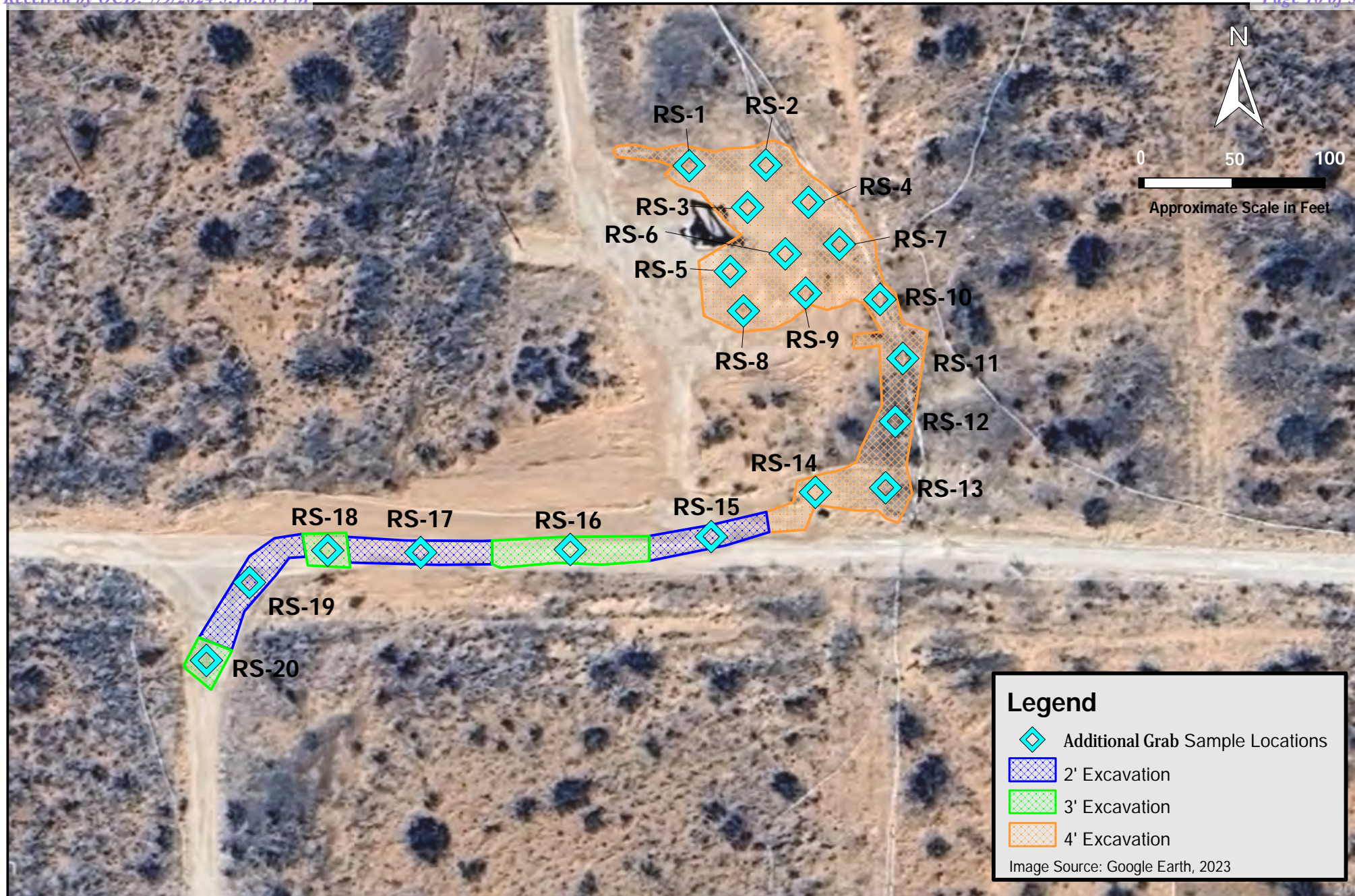
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**TETRA TECH**

1500 CityWest Boulevard
Suite 1000
Houston, Texas 77042

MAVERICK PERMAIN, LLC

nAPP2302035947

32.800678°, -103.769520°

LEA COUNTY, NEW MEXICO

**MCA 254 FLOWLINE RELEASE
ADDITIONAL SAMPLING LOCATION MAP**

PROJECT NO: 212C-MD-03216

DATE: JULY 9, 2024

DESIGNED BY: CHT

Figure No.

7

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TABLES



TABLE 1
SUMMARY OF ANALYTICAL RESULTS
ENSOLUM ASSESSMENT SAMPLING - INCIDENT ID nAPP2302035947
MAVERICK PERMIAN, LLC
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LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride ¹		BTEX ²										TPH ³							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)	
		C ₆ - C ₁₀	> C ₁₀ - C ₂₈	> C ₂₈ - C ₃₆	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg			
Reclamation Requirements (19.15.29 NMAC)			600		10								50							100		
BH01A	3/22/2023	0.0 - 1.0	23		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH01C	3/22/2023	0.0 - 1.0	440		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH02A	3/22/2023	0.0 - 1.0	845		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH02C	3/22/2023	0.0 - 3.0	286		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH03A	3/22/2023	0.0 - 1.0	286		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH03C	3/22/2023	0.0 - 3.0	866		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH04A	3/23/2023	0.0 - 1.0	2,940		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		185	96.2	281.2			
BH04C	3/23/2023	0.0 - 3.0	100		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH05A	3/27/2023	0.0 - 1.0	198		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH05C	3/27/2023	0.0 - 3.0	46		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH06A	3/27/2023	0.0 - 1.0	209		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		414	217	631.0			
BH06C	3/27/2023	0.0 - 3.0	480		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		163	73.2	236.2			
BH07A	3/27/2023	0.0 - 1.0	665		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
BH07C	3/27/2023	0.0 - 3.0	668		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
SS01	3/23/2023	0.0 - 0.5	162		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
SS02	3/23/2023	0.0 - 0.5	58		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
SS03	3/23/2023	0.0 - 0.5	143		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
SS04	3/23/2023	0.0 - 0.5	180		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		
SS05	3/23/2023	0.0 - 0.5	64		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		<50.0		<50.0	<150.0		

NOTES:

bgs: Below ground surface

mg/kg: Milligrams per kilogram

TPH: Total Petroleum Hydrocarbons

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

1: Method SM4500Cl-B

2: Method 8021B

3: Method 8015M

Bold and highlighted values indicate exceedance of Reclamation Requirements (19.15.29 NMAC).



TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SHALLOW SOIL CONFIRMATION SAMPLING - INCIDENT ID nAPP2302035947
MAVERICK PERMIAN, LLC
MCA 254 RELEASE
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride ¹		BTEX ²										TPH ³					
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO	
		C ₆ - C ₁₀		> C ₁₀ - C ₂₈		> C ₂₈ - C ₃₆														
		feet bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
Reclamation Requirements (19.15.29 NMAC)			600		10							50						100		
FS - 30 (2.0')	9/25/2023	2.0 - 2.5	176		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 31 (2.0')	9/25/2023	2.0 - 2.5	304		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 32 (2.0')	9/25/2023	2.0 - 2.5	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 33 (2')	9/15/2023	2.0 - 2.5	640		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 33 (3')	9/20/2023	3.0 - 3.5	368		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 34 (2')	9/15/2023	2.0 - 2.5	176		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 35 (2')	9/15/2023	2.0 - 2.5	608		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 35 (3')	9/20/2023	3.0 - 3.5	336		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 36 (2')	9/15/2023	2.0 - 2.5	656		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 36 (3')	9/20/2023	3.0 - 3.5	400		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 37 (2')	9/14/2023	2.0 - 2.5	224		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 38 (2')	9/14/2023	2.0 - 2.5	336		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 39 (2')	9/15/2023	2.0 - 2.5	384		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 40 (2')	9/15/2023	2.0 - 2.5	352		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 41 (2')	9/15/2023	2.0 - 2.5	736		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 41 (3')	9/20/2023	3.0 - 3.5	320		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 42 (2')	9/15/2023	2.0 - 2.5	576		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 43 (2')	9/15/2023	2.0 - 2.5	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 43 (2')	9/18/2023	2.0 - 2.5	288		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 44 (2')	9/18/2023	2.0 - 2.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 45 (2')	9/18/2023	2.0 - 2.5	368		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 46 (2')	9/18/2023	2.0 - 2.5	256		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
FS - 47 (2')	9/18/2023	2.0 - 2.5	336		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0	<10.0	-	
SW - 1	9/7/2023	0.5 - 4.0	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	15.8	11.8		27.6	
SW - 2	9/7/2023	0.5 - 4.0	256		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	<10.0	<10.0		-	
SW - 4	9/14/2023	0.5 - 4.0	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	<10.0	<10.0		-	
SW - 5	9/14/2023	0.5 - 4.0	560		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	35.8	32.8		68.6	
SW - 6	9/14/2023	0.5 - 4.0	128		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	<10.0	<10.0		-	
SW - 7	9/14/2023	0.5 - 4.0	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	<10.0	<10.0		-	
SW - 8	9/14/2023	0.5 - 4.0	752		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	<10.0	<10.0		-	
SW - 8	9/20/2023	0.5 - 4.0	128		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	27.2	28.7		55.9	
SW - 9	9/14/2023	0.5 - 4.0	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	<10.0	<10.0		-	
SW - 10	9/14/2023	0.5 - 4.0	448		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	<10.0	<10.0		-	
SW - 11	9/14/2023	0.5 - 4.0	416		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	57.3	19.5		76.8	
SW - 13	9/25/2023	0.5 - 2.0	272		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	<10.0	<10.0		-	



TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SHALLOW SOIL CONFIRMATION SAMPLING - INCIDENT ID nAPP2302035947
MAVERICK PERMIAN, LLC
MCA 254 RELEASE
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride ¹		BTEX ²										TPH ³							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)	
												C ₆ - C ₁₀		> C ₁₀ - C ₂₈		> C ₂₈ - C ₃₆						
		feet bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
Reclamation Requirements (19.15.29 NMAC)			600		10								50							100		
SW - 32	9/15/2023	0.5 - 2.0	640		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 32	9/20/2023	0.5 - 3.0	304		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 33	9/14/2023	0.5 - 2.0	464		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		158		87.6	246		
SW - 33	9/20/2023	0.5 - 3.0	208		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 34	9/15/2023	0.5 - 2.0	320		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 35	9/15/2023	0.5 - 2.0	304		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 36	9/18/2023	0.5 - 2.0	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 37	9/18/2023	0.5 - 2.0	224		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 38	9/18/2023	0.5 - 2.0	336		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 39	9/15/2023	0.5 - 2.0	112		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 40	9/15/2023	0.5 - 2.0	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 41	9/14/2023	0.5 - 2.0	304		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 42	9/15/2023	0.5 - 2.0	208		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 43	9/25/2023	0.5 - 2.0	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		33.1		<10.0	33.1		
SW - 12	9/14/2023	0.5 - 4.0	112		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 44	9/14/2023	0.5 - 4.0	224		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 45	9/14/2023	0.5 - 4.0	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 46	9/14/2023	0.5 - 4.0	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 47	9/14/2023	0.5 - 4.0	352		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		79.3		31	110.3		
SW - 47	9/20/2023	0.5 - 4.0	112		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 54	9/5/2023	0.5 - 4.0	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 55	9/5/2023	0.5 - 4.0	112		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 57	9/5/2023	0.5 - 4.0	160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
SW - 58	9/5/2023	0.5 - 4.0	128		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
RS - 15 (2-2.5')	6/27/2024	2.0 - 2.5	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
RS - 16 (2-2.5')	6/27/2024	2.0 - 2.5	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
RS - 17 (3-3.5')	6/27/2024	3.0 - 3.5	224		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
RS - 18 (2-2.5')	6/27/2024	2.0 - 2.5	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
RS - 19 (2-2.5')	6/27/2024	2.0 - 2.5	256		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		
RS - 20 (2-2.5')	6/27/2024	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0	-		

NOTES:

bgs: Below ground surface

GRO: Gasoline Range Organics

1: Method SM4500Cl-B

mg/kg: Milligrams per kilogram

DRO: Diesel Range Organics

2: Method 8021B

TPH: Total Petroleum Hydrocarbons

ORO: Oil Range Organics

3: Method 8015M

Bold and highlighted values indicate exceedance of Reclamation Requirements (19.15.29 NMAC).**Area where Sample was collected was overexcavated to achieve clean margins**



TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS
MCA 254 DEEP CONFIRMATION SAMPLING - INCIDENT ID NAPP2302035647
MAVERICK PERMIAN, LLC
MCA 254 FLOWLINE RELEASE
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride ¹		BTEX ²										TPH ³								Total TPH (GRO+DRO+EXT DRO) mg/kg			
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		DRO+EXT DRO					
		feet bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	C ₆ - C ₁₀	mg/kg	Q	> C ₁₀ - C ₂₈	mg/kg	Q	> C ₂₈ - C ₃₆	mg/kg		Q	> C ₁₀ - C ₃₆	mg/kg
RRALs (Table I 19.15.29.12 NMAC)			10,000		10								50											1,000		2,500
FS - 1 (4.0')	9/5/2023	4.0 - 4.5	480		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 2 (4.0')	9/5/2023	4.0 - 4.5	576		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		10.2		<10.0		-			10.2		
FS - 3 (4.0')	9/7/2023	4.0 - 4.5	2,000		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 4 (4.0')	9/5/2023	4.0 - 4.5	320		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 5 (4.0')	9/5/2023	4.0 - 4.5	5,920		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		111		56.5		167.5			167.5		
FS - 5 (8.0')	9/15/2023	8.0 - 8.5	2,920		NA		NA		NA		NA		NA		NA		NA		NA		NA			NA		
FS - 5 (10-11')	10/26/2023	10.0 - 11.0	3,520		NA		NA		NA		NA		NA		<10.0		<10.0		<10.0		-			-		
FS - 5 (14-15')	10/26/2023	14.0 - 15.0	2,040		NA		NA		NA		NA		NA		NA		NA		NA		NA			NA		
FS - 5 (19-20')	10/26/2023	19.0 - 20.0	2,560		NA		NA		NA		NA		NA		NA		NA		NA		NA			NA		
FS - 5 (24-25')	10/26/2023	24.0 - 25.0	3,360		NA		NA		NA		NA		NA		NA		NA		NA		NA			NA		
FS - 5 (24-25')	10/26/2023	29.0 - 30.0	2,880		NA		NA		NA		NA		NA		NA		NA		NA		NA			NA		
FS - 6 (4.0')	9/5/2023	4.0 - 4.5	4,080		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 11 (4.0')	9/7/2023	4.0 - 4.5	208		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 12 (4.0')	9/7/2023	4.0 - 4.5	480		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		31.7		16.5		48.2			48.2		
FS - 13 (4.0')	9/7/2023	4.0 - 4.5	416		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 14 (4.0')	9/7/2023	4.0 - 4.5	864		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 15 (4.0')	9/7/2023	4.0 - 4.5	1,360		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 16 (4.0')	9/7/2023	4.0 - 4.5	416		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 18 (4.0')	9/18/2023	4.0 - 4.5	2,840		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 19 (4.0')	9/18/2023	4.0 - 4.5	2,520		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 22 (4.0')	9/18/2023	4.0 - 4.5	768		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 23 (4.0')	9/14/2023	4.0 - 4.5	3,320		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		41		20.2		61.2			61.2		
FS - 24 (4.0')	9/14/2023	4.0 - 4.5	1,440		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		14.5		<10.0		14.5			14.5		
FS - 25 (4.0')	9/14/2023	4.0 - 4.5	512		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 27 (4.0')	9/14/2023	4.0 - 4.5	2,000		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
FS - 28 (4.0')	9/18/2023	4.0 - 4.5	1,070		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		22.2		15.9		38.1			38.1		
FS - 29 (4.0')	9/14/2023	4.0 - 4.5	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 1 (4-5')	6/24/2024	4.0 - 4.5	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 2 (4-5')	6/24/2024	4.0 - 4.5	672		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 3 (4-5')	6/24/2024	4.0 - 4.5	3,040		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 4 (4-5')	6/26/2024	4.0 - 5.0	384		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 5 (4-5')	6/26/2024	4.0 - 5.0	272		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 6 (4-5')	6/26/2024	4.0 - 5.0	480		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 7 (4-4.5')	6/26/2024	4.0 - 4.5	416		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 8 (4-5')	6/26/2024	4.0 - 5.0	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 9 (4-4.5')	6/26/2024	4.0 - 4.5	416		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 10 (4-4.5')	6/26/2024	4.0 - 4.5	1,100		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 11 (4-5')	6/26/2024	4.0 - 5.0	1,360		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 12 (4-5')	6/26/2024	4.0 - 5.0	2,400		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 13 (4-5')	6/27/2024	4.0 - 5.0	720		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		
RS - 14 (4-5')	6/27/2024	4.0 - 5.0	576		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-			-		

NOTES:

bgs: Below ground surface

GRO: Gasoline Range Organics

1: Method SM4500Cl-B

Bold and highlighted values indicate exceedance of Table I 19.15.29.12 NMAC.

mg/kg: Milligrams per kilogram

DRO: Diesel Range Organics

2: Method 8021B

TPH: Total Petroleum Hydrocarbons

ORO: Oil Range Organics

3: Method 8015M

NA: Not Analyzed

Revised Assessment, Remediation, and Closure Report
Maverick Permian, LLC
MCA 254 Flowline Release
Incident ID: nAPP2302035947

July 12, 2024

ATTACHMENT 1 – SITE CHARACTERIZATION DATA

OSE POD Location Map



11/5/2023, 8:08:46 AM

GIS WATERS PODs

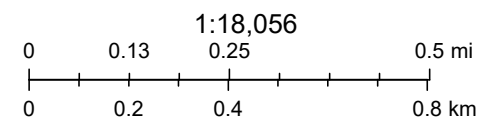
● Active



Pending



Plugged



Esri, HERE, IPC, Esri, HERE, Garmin, IPC, Maxar





Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

LEGEND

- MONITOR WELL LOCATION
- GROUNDWATER GRADIENT CONTOUR
- GROUNDWATER ELEVATION
- APPARENT GROUNDWATER GRADIENT

SCALE: 1 in = 550 feet

Feet 0 275 550



MAVERICK
NATURAL RESOURCES

FIGURE 5

GROUNDWATER GRADIENT MAP - OCTOBER 2022

MCA # 357

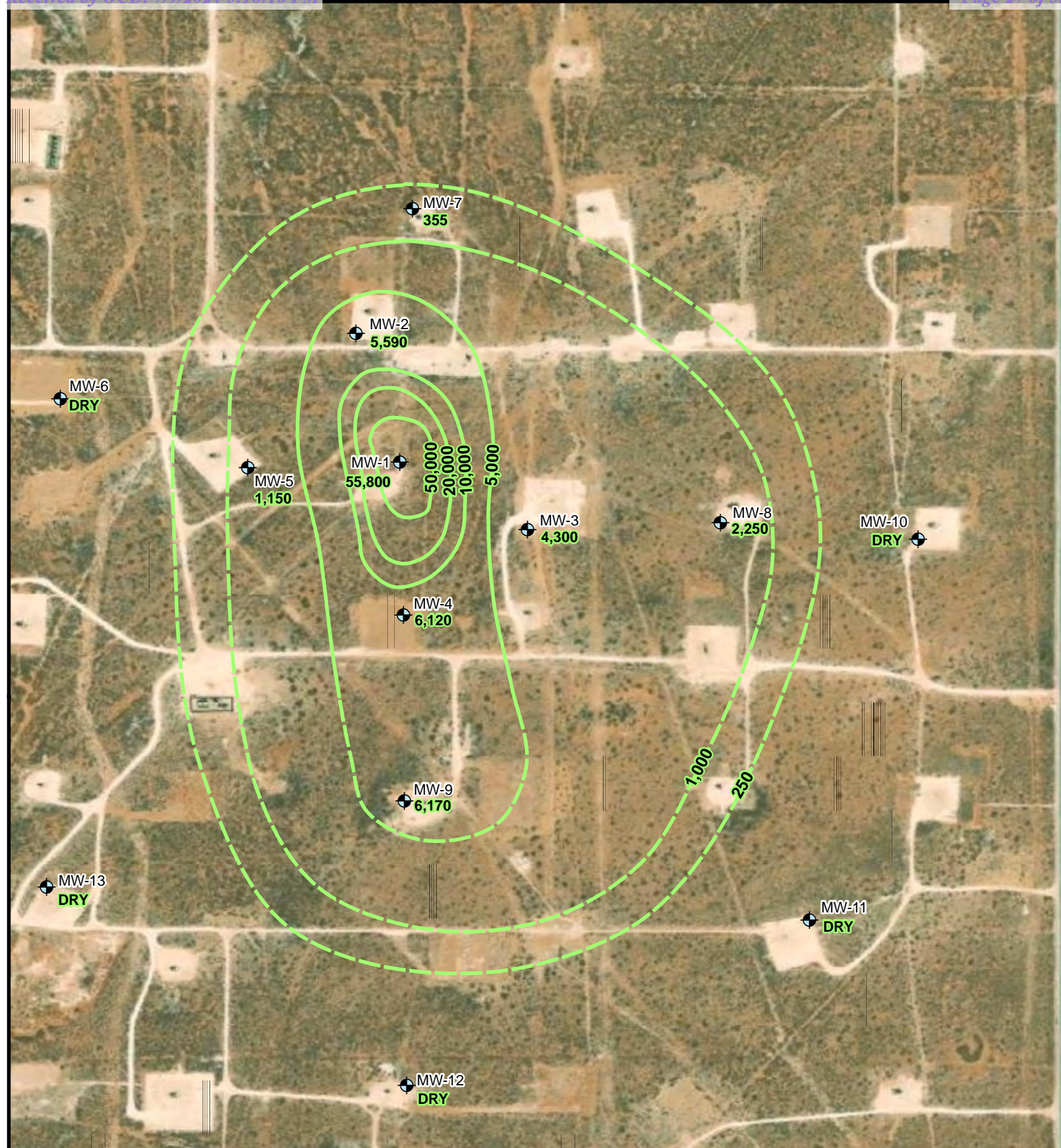
LEA COUNTY, NEW MEXICO

PROJECT : 212C-MD-02007

DATE : 1/27/2023

FILE : FIGURE 5 MCA 357





Service Layer Credits: Source: Esri, Maxar, Earthstar, Geographics, and the GIS User Community

LEGEND

- MONITOR WELL LOCATION
- 1,000 CHLORIDE CONCENTRATION (mg/L)
- DRY NOT SAMPLED - DRY
- *RRC REMEDIATION LIMIT FOR CHLORIDE = 250 mg/L

SCALE: 1 in = 600 feet

Feet 0 300 600



FIGURE 6

CHLORIDE CONCENTRATION MAP -
JANUARY 2022

MCA # 357

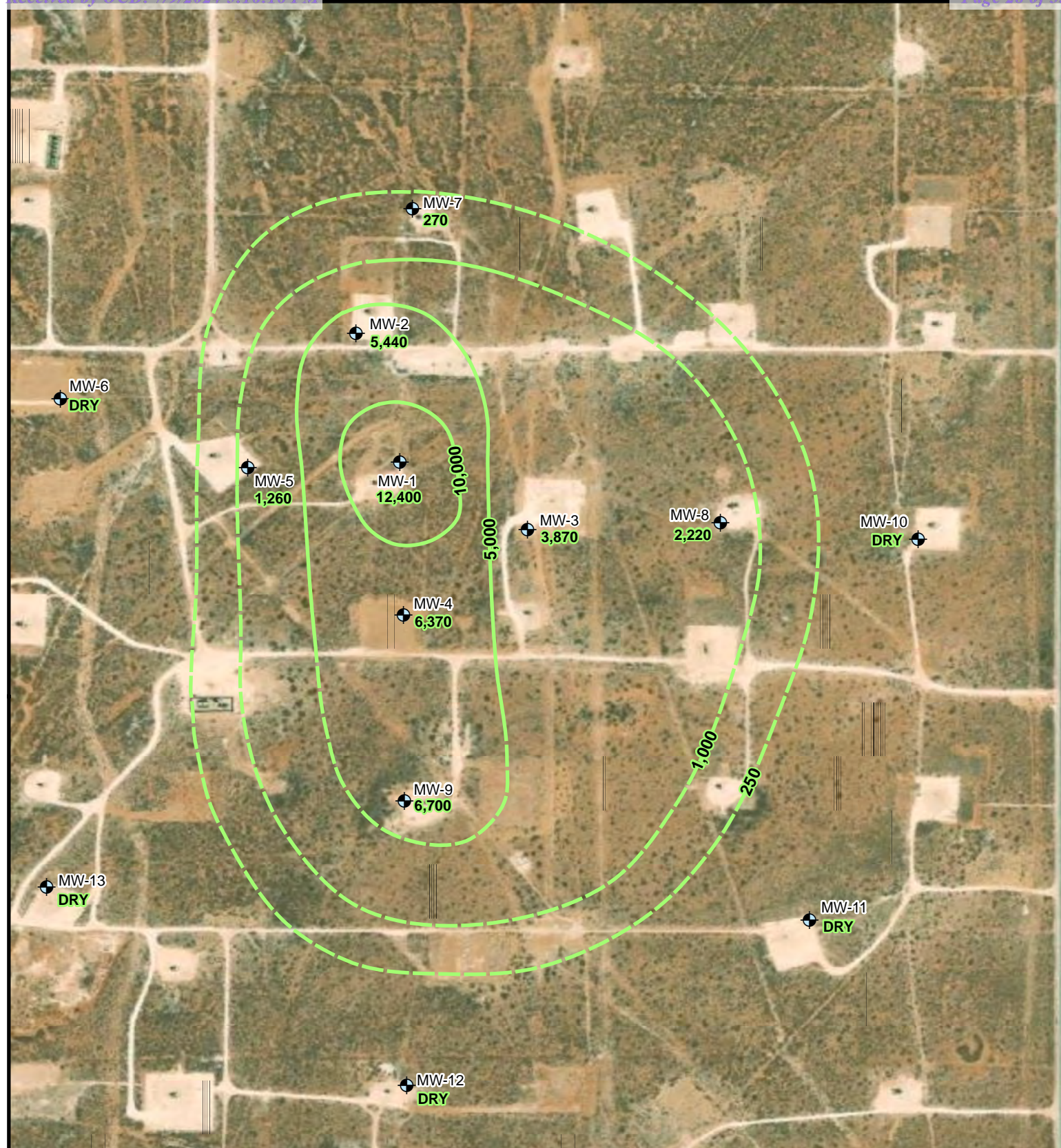
LEA COUNTY, NEW MEXICO

PROJECT : 212C-MD-02007

DATE : 1/26/2023

FILE : FIGURE 6 MCA 357





Service Layer Credits: Source: Esri, Maxar, Earthstar, Geographics, and the GIS User Community

LEGEND

- MONITOR WELL LOCATION
- 1,000** CHLORIDE CONCENTRATION (mg/L)
- DRY** NOT SAMPLED - DRY
- *RRC REMEDIATION LIMIT FOR CHLORIDE = 250 mg/L

SCALE: 1 in = 600 feet

Feet 0 300 600



FIGURE 8

CHLORIDE CONCENTRATION MAP - OCTOBER 2022

MCA # 357

LEA COUNTY, NEW MEXICO

PROJECT : 212C-MD-02007

DATE : 1/26/2023

FILE : FIGURE 8 MCA 357





Table 1
Groundwater Elevation Summary
MCA 357
Lea County, New Mexico

Well ID	Gauging Date	Well Total Depth (feet)	Depth to Water (feet BTOC)	Top of Casing Elevation (feet AMSL)	Groundwater Elevation (feet)
MW-1	1/11/2022	102.70	84.31	3,956.78	3,872.47
	4/4/2022	102.70	84.46	3,956.78	3,872.32
	10/18/2022	102.70	84.50	3,956.78	3,872.28
MW-2	1/11/2022	107.80	83.30	3,963.58	3,880.28
	4/4/2022	107.80	83.37	3,963.58	3,880.21
	10/18/2022	107.80	83.44	3,963.58	3,880.14
MW-3	1/11/2022	117.30	88.26	3,951.34	3,863.08
	4/4/2022	117.30	88.45	3,951.34	3,862.89
	10/18/2022	117.30	88.51	3,951.34	3,862.83
MW-4	1/11/2022	103.20	94.30	3,945.39	3,851.09
	4/4/2022	103.20	94.51	3,945.39	3,850.88
	10/18/2022	103.20	94.58	3,945.39	3,850.81
MW-5	1/11/2022	113.00	89.73	3,950.37	3,860.64
	4/4/2022	113.00	89.94	3,950.37	3,860.43
	10/18/2022	113.00	90.03	3,950.37	3,860.34
MW-6	1/11/2022	128.10	Dry	3,952.96	Dry
	4/4/2022	128.10	Dry	3,952.96	Dry
	10/18/2022	128.10	Dry	3,952.96	Dry
MW-7	1/11/2022	127.30	89.64	3,972.11	3,882.47
	4/4/2022	127.30	89.72	3,972.11	3,882.39
	10/18/2022	127.30	89.80	3,972.11	3,882.31
MW-8	1/11/2022	118.00	95.27	3,956.83	3,861.56
	4/4/2022	118.00	95.38	3,956.83	3,861.45
	10/18/2022	118.00	95.44	3,956.83	3,861.39
MW-9	1/11/2022	133.50	118.64	3,936.53	3,817.89
	4/4/2022	133.50	119.18	3,936.53	3,817.35
	10/18/2022	133.50	119.25	3,936.53	3,817.28
MW-10	1/11/2022	132.51	Dry	3,963.20	Dry
	4/4/2022	132.51	Dry	3,963.20	Dry
	10/18/2022	132.51	Dry	3,963.20	Dry
MW-11	1/11/2022	132.88	Dry	3,948.30	Dry
	4/4/2022	132.88	Dry	3,948.30	Dry
	10/18/2022	132.88	Dry	3,948.30	Dry
MW-12	1/11/2022	132.30	Dry	3,930.91	Dry
	4/4/2022	132.30	Dry	3,930.91	Dry
	10/18/2022	132.30	Dry	3,930.91	Dry
MW-13	1/11/2022	132.25	Dry	3,931.32	Dry
	4/4/2022	132.25	Dry	3,931.32	Dry
	10/18/2022	132.25	Dry	3,931.32	Dry

Notes:

BTOC: Below Top of Casing

AMSL: Above Mean Sea Level

NG: Not gauged

Table 2
Monitor Wells
Groundwater Analytical Summary
MCA 357
Lea County, New Mexico

Well ID	Sample Date	Bromide (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)
NMWQCC Groundwater Quality Standards		NE	250	600	1,000
MW-1	1/13/2022	167	55,800	756	83,200
	4/7/2022	18.4	11,000	194	21,300
	10/13/2022	21.7	12,400	222	27,500
MW-2	1/12/2022	7.04 J	5,590	269	13,900
	4/6/2022	10.2	6,010	306	7,460
	10/13/2022	10.4	5,440	270	9,460
MW-3	1/12/2022	8.81 J	4,300	180	8,380
	4/5/2022	8.7	4,310	185	5,860
	10/12/2022	11.5	3,870	159	7,080
MW-4	1/12/2022	7.82 J	6,120	181	14,700
	4/6/2022	8.35	6,730	198	8,020
	10/12/2022	11	6,370	174	13,800
MW-5	1/12/2022	2.04	1,150	136	3,320
	4/7/2022	4.49 J	1,040	152	3,530
	10/13/2022	2.95	1,260	124	3,060
MW-6	Not Sampled - Dry				
MW-7	1/11/2022	1.57	355	81.3	1,120
	4/6/2022	1.58	291	85.5	976
	10/13/2022	2.55	270	87.1	854
MW-8	1/13/2022	4.8 J	2,250	95.7	4,740
	4/5/2022	5.18	2,340	99.3	3,420
	10/12/2022	8.99	2,220	86.9	5,110
MW-9	1/12/2022	8.85 J	6,170	472	16,200
	4/6/2022	11.3	6,700	526	12,800
	10/12/2022	11	6,040	470	15,600
MW-10	Not Sampled - Dry				
MW-11	Not Sampled - Dry				
MW-12	Not Sampled - Dry				
MW-13	Not Sampled - Dry				

Notes:

NMWQCC: New Mexico Water Quality Control Commission

Exceeds applicable regulatory standards

NE: Not Established

TDS: Total Dissolved Solids

J: The identification of the analyte is acceptable; the reported value is an estimate



Table 3
Quality Assurance/Quality Control Summary
MCA 357
Lea County, New Mexico

Well ID	Sample Date	Analyte	Primary Sample Result (mg/L)	Duplicate Sample Result (mg/L)	RPD	Within DQOs
MW-1	1/13/2022	Bromide	167	91	58.8%	Yes*
		Chloride	55,800	31,300	56.3%	No
		Sulfate	756	435	53.9%	Yes*
		TDS	83,200	58,800	34.4%	No
MW-1	4/7/2022	Bromide	18.4	20	8.3%	Yes
		Chloride	11,000	11,000	0.0%	Yes
		Sulfate	194	202	4.0%	Yes
		TDS	21,300	22,300	4.6%	Yes
MW-1	10/13/2022	Bromide	21.7	17.7	20.3%	Yes
		Chloride	12,400	10,200	19.5%	Yes
		Sulfate	222	184	18.7%	Yes
		TDS	27,500	21,700	23.6%	Yes

Notes:

RPD: Relative Percent Difference calculated as $= (SR-DR) * 200 / (SR+DR)$

DQO: Data Quality Objectives

ND: Not Detected above the laboratory method detection limit

N/A: Not Applicable

* Analytical results are at an estimated concentration for the primary sample and DQOs are adjusted to reflect



Search

Map Unit Legend

Lea County, New Mexico (NM025)

Lea County, New Mexico (NM025)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MF	Maljamar and Palomas fine sands, 0 to 3 percent slopes	3.8	100.0%

Totals for Area of Interest		3.8	100.0%
-----------------------------	--	-----	--------

Soil Map



0 70 ft

Warning: Soil Map may not be valid at this scale.

Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

Most of the soils similar to the major components have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Some minor components, however, have properties and behavior characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Lea County, New Mexico

MF—Maljamar and Palomas fine sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: dmqb

Elevation: 3,000 to 3,900 feet

Mean annual precipitation: 10 to 15 inches

Mean annual air temperature: 60 to 62 degrees F

Frost-free period: 190 to 205 days

Map Unit Description: Maljamar and Palomas fine sands, 0 to 3 percent slopes---Lea County,
New Mexico

MCA 254 Soils

Farmland classification: Farmland of statewide importance

Map Unit Composition

Maljamar and similar soils: 46 percent

Palomas and similar soils: 44 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Maljamar

Setting

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 24 inches: fine sand

Bt - 24 to 50 inches: sandy clay loam

Bkm - 50 to 60 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 40 to 60 inches to petrocalcic

Drainage class: Well drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 7e

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: R070BD003NM - Loamy Sand

Hydric soil rating: No

Description of Palomas

Setting

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Map Unit Description: Maljamar and Palomas fine sands, 0 to 3 percent slopes---Lea County,
New Mexico

MCA 254 Soils

Parent material: Alluvium derived from sandstone

Typical profile

A - 0 to 16 inches: fine sand

Bt - 16 to 60 inches: sandy clay loam

Bk - 60 to 66 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 45 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Moderate (about 7.5
inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: R070BD003NM - Loamy Sand

Hydric soil rating: No

Minor Components

Kermit

Percent of map unit: 5 percent

Ecological site: R070BC022NM - Sandhills

Hydric soil rating: No

Wink

Percent of map unit: 5 percent

Ecological site: R070BD003NM - Loamy Sand

Hydric soil rating: No

Data Source Information


Soil Survey Area: Lea County, New Mexico


Survey Area Data: Version 20, Sep 6, 2023


Revised Assessment, Remediation, and Closure Report
Maverick Permian, LLC
MCA 254 Flowline Release
Incident ID: nAPP2302035947


July 12, 2024


ATTACHMENT 2 – BORING LOGS


								Sample Name: BH01		Date: 03-22-23	
LITHOLOGIC / SOIL SAMPLING LOG								Site Name: MCA 254			
								Incident Number:			
								Job Number: 03D2057064			
Coordinates: 32.800678, -103.76952								Logged By: J.Falcomata		Method: Hand Auger	
								Hole Diameter: 4"		Total Depth: 3'	
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			
N	246	0.3	N	BH01A	1	0 1	SP-SM	SAND: fine grained, trace amounts of silt, poorly graded, redish brown to brown, dry, no odor, non plastic.			
N	420	0.4	N	BH01B	2	2	II	SAA			
N	207	0.6	N	BH01C	3	3	SP-SC	SAND: fine grained, trace amounts clay, poorly graded, reddish brown to brown, dry, no odor, medium plasticity.			
						4					
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					


								Sample Name: BH02		Date: 03/22/23	
								Site Name: MCA 254			
								Incident Number:			
								Job Number: 03D02057064			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: J. Falcomata		Method: Hand Auger	
Coordinates: 32.8175, -103.76952								Hole Diameter: 4'		Total Depth: 3'	
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			
N	873	0.7	N	BH02A	1	1	SP-SM	SAND: fine grained, trace amounts of silt, poorly graded, reddish brown to brown, dry, no odor, non plastic.			
N	795	0.8	N	BH02B	2	2	II	SAA			
N	532	0.9	N	BH02C	3	3	SP-SC	SAND: fine grained, trace amounts of clay and silt, poorly graded, reddish brown to brown, dry, no odor, low plasticity.			
						4					
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					


								Sample Name: BH03		Date: 03-22-23	
								Site Name: MCA 254			
								Incident Number:			
								Job Number: 03D2057064			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: J.Falcomata		Method: Hand Auger	
Coordinates: 32.8175, -103.76952								Hole Diameter: 4"		Total Depth: 3'	
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			
N	<168	0.8	N	BH03A	1	0	SP-SM	SAND: fine grained, trace amounts of silt, poorly graded, medium brown to reddish brown, dry, no odor, non plastic.			
N	<168	0.9	N	BH03B	2	2	SP-SC	SAND: fine grained, trace amounts of silt and clay, fine grained, reddish brown, dry, no odor, low plasticity.			
N	<168	0.9	N	BH03C	3	3	II	SAA			
						4					
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					

								Sample Name: BH04		Date: 03/23-24/23	
								Site Name: MCA 254			
								Incident Number:			
								Job Number: 03D2057064			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: J.Falcomata		Method: Hand Auger	
Coordinates: 32.8175, -103.76952								Hole Diameter: 4"		Total Depth: 4'	
Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 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			
N	8,730	1	N	BH04A	1	0	SP-SM	SAND: fine grained, trace amounts of silt, poorly graded, reddish brown, dry, no odor, non plastic.			
N	6,249	1	N	BH04B	2	2	SP-SC	SAND: fine grained, trace amounts of silt and clay, fine grained, reddish brown to slightly tan in parts, dry, low plasticity.			
N	1,864	0.8	N	BH04C	3	3	II	SAA			
N	700	0.9	N	BH04D	4	4	SP-SC	SAND: fine to coarse grained, trace amounts of silt and clay, moderate amounts of gravel, tan with a reddish brown tint, dry, low plasticity.			
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					

								Sample Name: BH05		Date: 03/23/23	
LITHOLOGIC / SOIL SAMPLING LOG								Site Name: MCA 254			
								Incident Number:			
								Job Number: 03D2057064			
Coordinates: 32.8175, -103.76952								Logged By: J.Falcomata		Method: Hand Auger	
								Hole Diameter: 4"		Total Depth: 3'	
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			
N	3,421	1.2	N	BH05A	1	1	SP-SM	SAND: fine grained, silty, poorly graded, reddish brown, dry, no odor, non plastic.			
N	1,478	1.3	N	BH05B	2	2	SP-SC	SAND: fine grained, silty, trace amounts of clay, poorly graded, reddish brown, dry, no odor, low plasticity.			
N	240	1.3	N	BH05C	3	3	II	SAA			
						4					
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					

 ENSOLUM								Sample Name: BH06		Date: 003/27/23	
								Site Name: MCA 254			
								Incident Number:			
								Job Number: 03D2057064			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: J.FALCOMATA		Method: HAND AUGER	
Coordinates: 32.800678, -103.16952								Hole Diameter: 4"		Total Depth: 3'	
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			
-	<168	0.6	N	BH06A	1	0	SP-SM	SAND: fine			
-	<168	0.7	N	BH06B	2	2	II	SAA			
-	<168	0.5	N	BH06C	3	3	SP-SP	SAND: fine grained, very silty, poorly graded, reddish brown, dry, no odor, non plastic.			
						4					
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					

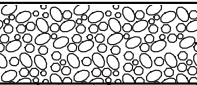
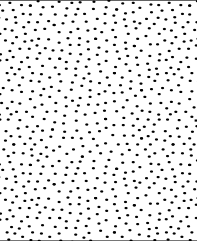
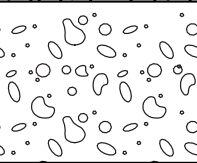
								Sample Name: BH07		Date: 03/27/23	
								Site Name: MCA 254			
								Incident Number:			
								Job Number: 03D2057064			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: J.Falcomata		Method: Hand Auger	
Coordinates: 32.800678, -103.16952								Hole Diameter: 4"		Total Depth: 3'	
Comments: Field 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			
-	207	0.6	N	BH07A	1	1	SP-SM	SAND: fine grained, silty, trace amounts of small gravel, poorly graded, reddish brown, dry, slight odor, non plastic. SAND: fine grained, silty, trace amounts of small gravel and clay, poorly graded, reddish brown, slight odor, low plasticity. SAA			
-	795	0.5	N	BH07B	2	2	SP-SC				
-	207	0.6	N	BH07C	3	3	II				
						4					
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					

 ENSOLUM								Sample Name: BH08		Date: 03/27/23	
								Site Name: MCA 254			
								Incident Number:			
								Job Number: 03D2057064			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: J.Falcomata		Method: Hand Auger	
Coordinates: 32.800678, -103.16952								Hole Diameter: 4"		Total Depth: 3'	
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			
-	420	0.7	N	BH08A	1	1	SP-SM	SAND: fine grained, very silty, poorly graded, medium brown, dry, no odor, non plastic			
-	593	0.6	N	BH08B	2	2	II	SAA			
-	515	0.4	N	BH08C	3	3	SP-SM	SAND: fine grained, very silty, trace amounts small gravel, poorly graded, medium brown to dark reddish brown, dry, no odor, non plastic.			
						4					
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					

BORING LOG: FS-5

PROJECT NUMBER: 212C-MD-03216	DRILLING COMPANY: Wester	LATITUDE: 32.800656°
PROJECT NAME: MCA 254 Remediation	DRILLER: West Texas Water Well	LONGITUDE: -103.769632°
CLIENT: Maverick Permian, LLC	DRILL RIG: Air Rotary Rig	SURFACE ELEVATION: 3,941 Feet AMSL
ADDRESS: 1410 NW County Road Hobbs, NM 88240	DRILLING METHOD: Air Rotary	WELL TOC: N/A
	TOTAL DEPTH: 30.0 Feet	LOGGED BY: Jorge Fernandez Velo
	DIAMETER: 8 Inches	CHECKED BY: Charles Terhune

COMMENTS: AMSL: Above Mean Sea Level

Depth (Feet)	Drilling Method	Chloride Screen (ppm)	Sample Type	Samples	Analysed?	Graphic Log	Material Description
2	AR						CALICHE, white, wet from rain, moderately sorted, angular, homogeneous.
4							SAND, reddish brown, wet from rain, fine grained, medium dense, poorly sorted, sub-angular to sub-rounded, homogeneous.
6							
8							
10		3,920	SS	BH01_5-5.3	Yes		CALICHE, white, dry, moderately sorted, sub-angular to sub-rounded, homogeneous.
12							
14		2,050	SS	BH01_5.8-6	Yes		
16							
18							
20		2,980	SS	BH01_6.4-6.8	Yes		
22							
24		2,480	SS	BH01_8-8.3	Yes		
26							
28							
30		2,950	SS	BH01_8.4-8.5	Yes		
							End of Hole at 30 feet below ground surface.

Disclaimer This bore log is intended for environmental not geotechnical purposes.

Page 1 of 1

Revised Assessment, Remediation, and Closure Report
Maverick Permian, LLC
MCA 254 Flowline Release
Incident ID: nAPP2302035947

July 12, 2024

ATTACHMENT 3 – LABORATORY ANALYTICAL DATA



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701
Generated 4/7/2023 5:17:49 PM

JOB DESCRIPTION

MCA 254
SDG NUMBER 03D2057064

JOB NUMBER

880-26509-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

Eurofins Midland

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
4/7/2023 5:17:49 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: MCA 254

Laboratory Job ID: 880-26509-1
SDG: 03D2057064

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Definitions/Glossary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Job ID: 880-26509-1

Laboratory: Eurofins Midland

Narrative	Job Narrative 880-26509-1
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Receipt

The samples were received on 3/28/2023 7:58 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-50191 and analytical batch 880-50285 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-50011/2-A) and (LCSD 880-50011/3-A). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-50414 and analytical batch 880-50612 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. SS05 (880-26509-5), (880-26509-A-5-D MS) and (880-26509-A-5-E MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Client Sample ID: SS01
Date Collected: 03/23/23 14:00
Date Received: 03/28/23 07:58
Sample Depth: 0.5'

Lab Sample ID: 880-26509-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00202	U	0.00202	mg/Kg		04/03/23 12:30	04/04/23 11:30	1	
Toluene	0.00503		0.00202	mg/Kg		04/03/23 12:30	04/04/23 11:30	1	
Ethylbenzene	0.00697		0.00202	mg/Kg		04/03/23 12:30	04/04/23 11:30	1	
m-Xylene & p-Xylene	0.00557		0.00404	mg/Kg		04/03/23 12:30	04/04/23 11:30	1	
o-Xylene	0.00262		0.00202	mg/Kg		04/03/23 12:30	04/04/23 11:30	1	
Xylenes, Total	0.00819		0.00404	mg/Kg		04/03/23 12:30	04/04/23 11:30	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	99		70 - 130			04/03/23 12:30	04/04/23 11:30	1	
1,4-Difluorobenzene (Surr)	102		70 - 130			04/03/23 12:30	04/04/23 11:30	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	0.0202		0.00404	mg/Kg			04/04/23 15:09	1	
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<50.0	U	50.0	mg/Kg			04/03/23 14:09	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/31/23 09:25	04/01/23 04:22	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/31/23 09:25	04/01/23 04:22	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/31/23 09:25	04/01/23 04:22	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	106		70 - 130			03/31/23 09:25	04/01/23 04:22	1	
o-Terphenyl	116		70 - 130			03/31/23 09:25	04/01/23 04:22	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	162		4.99	mg/Kg			04/06/23 17:16	1	

Client Sample ID: SS02
Date Collected: 03/23/23 14:05
Date Received: 03/28/23 07:58
Sample Depth: 0.5'

Lab Sample ID: 880-26509-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:30	04/04/23 11:51	1	
Toluene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:30	04/04/23 11:51	1	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:30	04/04/23 11:51	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/03/23 12:30	04/04/23 11:51	1	
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:30	04/04/23 11:51	1	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/03/23 12:30	04/04/23 11:51	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	100		70 - 130			04/03/23 12:30	04/04/23 11:51	1	

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Client Sample ID: SS02

Lab Sample ID: 880-26509-2

Date Collected: 03/23/23 14:05

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	96		70 - 130	04/03/23 12:30	04/04/23 11:51	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/04/23 15:09	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/03/23 14:09	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/31/23 09:25	04/01/23 04:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/31/23 09:25	04/01/23 04:44	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/31/23 09:25	04/01/23 04:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130			03/31/23 09:25	04/01/23 04:44	1
o-Terphenyl	103		70 - 130			03/31/23 09:25	04/01/23 04:44	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58.0		4.97	mg/Kg			04/06/23 17:21	1

Client Sample ID: SS03

Lab Sample ID: 880-26509-3

Date Collected: 03/23/23 14:10

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 0.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		04/03/23 12:30	04/04/23 15:37	1
Toluene	<0.00198	U	0.00198	mg/Kg		04/03/23 12:30	04/04/23 15:37	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		04/03/23 12:30	04/04/23 15:37	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		04/03/23 12:30	04/04/23 15:37	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		04/03/23 12:30	04/04/23 15:37	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		04/03/23 12:30	04/04/23 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	04/03/23 12:30	04/04/23 15:37	1
1,4-Difluorobenzene (Surr)	86		70 - 130	04/03/23 12:30	04/04/23 15:37	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			04/05/23 11:07	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			04/03/23 14:09	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Client Sample ID: SS03
Date Collected: 03/23/23 14:10
Date Received: 03/28/23 07:58
Sample Depth: 0.5'

Lab Sample ID: 880-26509-3
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		03/31/23 09:25	04/01/23 05:05	1	
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		03/31/23 09:25	04/01/23 05:05	1	
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/31/23 09:25	04/01/23 05:05	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	93		70 - 130			03/31/23 09:25	04/01/23 05:05	1	
o-Terphenyl	107		70 - 130			03/31/23 09:25	04/01/23 05:05	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	143		5.00	mg/Kg			04/06/23 17:26	1	

Client Sample ID: SS04
Date Collected: 03/23/23 14:15
Date Received: 03/28/23 07:58
Sample Depth: 0.5'

Lab Sample ID: 880-26509-4
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:30	04/04/23 16:18	1	
Toluene	0.0120		0.00199	mg/Kg		04/03/23 12:30	04/04/23 16:18	1	
Ethylbenzene	0.0198		0.00199	mg/Kg		04/03/23 12:30	04/04/23 16:18	1	
m-Xylene & p-Xylene	0.0143		0.00398	mg/Kg		04/03/23 12:30	04/04/23 16:18	1	
o-Xylene	0.00647		0.00199	mg/Kg		04/03/23 12:30	04/04/23 16:18	1	
Xylenes, Total	0.0208		0.00398	mg/Kg		04/03/23 12:30	04/04/23 16:18	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	117		70 - 130			04/03/23 12:30	04/04/23 16:18	1	
1,4-Difluorobenzene (Surr)	85		70 - 130			04/03/23 12:30	04/04/23 16:18	1	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	0.0526		0.00398	mg/Kg			04/05/23 11:07	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.9	U	49.9	mg/Kg			04/03/23 14:09	1	

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/31/23 09:25	04/01/23 05:26	1	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/31/23 09:25	04/01/23 05:26	1	
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/31/23 09:25	04/01/23 05:26	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	89		70 - 130			03/31/23 09:25	04/01/23 05:26	1	
o-Terphenyl	103		70 - 130			03/31/23 09:25	04/01/23 05:26	1	

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Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Client Sample ID: SS04
Date Collected: 03/23/23 14:15
Date Received: 03/28/23 07:58
Sample Depth: 0.5'

Lab Sample ID: 880-26509-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	180		5.00	mg/Kg			04/06/23 17:30	1	

Client Sample ID: SS05
Date Collected: 03/23/23 14:25
Date Received: 03/28/23 07:58
Sample Depth: 0.5'

Lab Sample ID: 880-26509-5
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:30	04/04/23 16:38	1	
Toluene	0.00353		0.00200	mg/Kg		04/03/23 12:30	04/04/23 16:38	1	
Ethylbenzene	0.00753		0.00200	mg/Kg		04/03/23 12:30	04/04/23 16:38	1	
m-Xylene & p-Xylene	0.00830		0.00399	mg/Kg		04/03/23 12:30	04/04/23 16:38	1	
o-Xylene	0.00493		0.00200	mg/Kg		04/03/23 12:30	04/04/23 16:38	1	
Xylenes, Total	0.0132		0.00399	mg/Kg		04/03/23 12:30	04/04/23 16:38	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	112		70 - 130			04/03/23 12:30	04/04/23 16:38	1	
1,4-Difluorobenzene (Surr)	85		70 - 130			04/03/23 12:30	04/04/23 16:38	1	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	0.0243		0.00399	mg/Kg			04/05/23 11:07	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.8	U	49.8	mg/Kg			04/03/23 14:09	1	

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		03/31/23 09:25	04/01/23 05:47	1	
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		03/31/23 09:25	04/01/23 05:47	1	
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/31/23 09:25	04/01/23 05:47	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	91		70 - 130			03/31/23 09:25	04/01/23 05:47	1	
o-Terphenyl	104		70 - 130			03/31/23 09:25	04/01/23 05:47	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	63.7	F1	4.96	mg/Kg			04/07/23 00:14	1	

Surrogate Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-26509-1	SS01	99	102
880-26509-2	SS02	100	96
880-26509-3	SS03	95	86
880-26509-4	SS04	117	85
880-26509-5	SS05	112	85
LCS 880-50191/1-A	Lab Control Sample	84	114
LCSD 880-50191/2-A	Lab Control Sample Dup	101	110
MB 880-50191/5-A	Method Blank	79	95
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-26509-1	SS01	106	116
880-26509-2	SS02	90	103
880-26509-3	SS03	93	107
880-26509-4	SS04	89	103
880-26509-5	SS05	91	104
LCS 880-50011/2-A	Lab Control Sample	121	146 S1+
LCSD 880-50011/3-A	Lab Control Sample Dup	123	149 S1+
MB 880-50011/1-A	Method Blank	105	130
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-50191/5-A					Client Sample ID: Method Blank				
Matrix: Solid					Prep Type: Total/NA				
Analysis Batch: 50285					Prep Batch: 50191				
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:30	04/04/23 10:48	1	
Toluene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:30	04/04/23 10:48	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:30	04/04/23 10:48	1	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/03/23 12:30	04/04/23 10:48	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:30	04/04/23 10:48	1	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/03/23 12:30	04/04/23 10:48	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	79		70 - 130			04/03/23 12:30	04/04/23 10:48	1	
1,4-Difluorobenzene (Surr)	95		70 - 130			04/03/23 12:30	04/04/23 10:48	1	

Lab Sample ID: LCS 880-50191/1-A					Client Sample ID: Lab Control Sample						
Matrix: Solid					Prep Type: Total/NA						
Analysis Batch: 50285					Prep Batch: 50191						
				Spike	LCS	LCS			%Rec		
Analyte				Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene				0.100	0.1268		mg/Kg		127	70 - 130	
Toluene				0.100	0.1053		mg/Kg		105	70 - 130	
Ethylbenzene				0.100	0.09615		mg/Kg		96	70 - 130	
m-Xylene & p-Xylene				0.200	0.1915		mg/Kg		96	70 - 130	
o-Xylene				0.100	0.09559		mg/Kg		96	70 - 130	
				LCS	LCS						
Surrogate		%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)		84		70 - 130							
1,4-Difluorobenzene (Surr)		114		70 - 130							

Lab Sample ID: LCSD 880-50191/2-A					Client Sample ID: Lab Control Sample Dup						
Matrix: Solid					Prep Type: Total/NA						
Analysis Batch: 50285					Prep Batch: 50191						
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD		
							Limits		RPD	Limit	
Benzene	0.100	0.1148		mg/Kg		115	70 - 130		10	35	
Toluene	0.100	0.1049		mg/Kg		105	70 - 130		0	35	
Ethylbenzene	0.100	0.1016		mg/Kg		102	70 - 130		6	35	
m-Xylene & p-Xylene	0.200	0.2112		mg/Kg		106	70 - 130		10	35	
o-Xylene	0.100	0.1057		mg/Kg		106	70 - 130		10	35	
Surrogate	LCSD		Limits								
	%Recovery	Qualifier									
4-Bromofluorobenzene (Surr)	101		70 - 130								
1,4-Difluorobenzene (Surr)	110		70 - 130								

QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-50011/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 49995						Prep Batch: 50011			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/31/23 09:25	03/31/23 20:55	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/31/23 09:25	03/31/23 20:55	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/31/23 09:25	03/31/23 20:55	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	105		70 - 130			03/31/23 09:25	03/31/23 20:55	1	
o-Terphenyl	130		70 - 130			03/31/23 09:25	03/31/23 20:55	1	

Lab Sample ID: LCS 880-50011/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 49995						Prep Batch: 50011			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	917.2		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)	1000	879.5		mg/Kg		88	70 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
1-Chlorooctane	121		70 - 130						
o-Terphenyl	146	S1+	70 - 130						

Lab Sample ID: LCSD 880-50011/3-A						Client Sample ID: Lab Control Sample Dup			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 49995						Prep Batch: 50011			
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	867.1		mg/Kg		87	70 - 130		6 20
Diesel Range Organics (Over C10-C28)	1000	808.8		mg/Kg		81	70 - 130		8 20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	123		70 - 130						
o-Terphenyl	149	S1+	70 - 130						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-50413/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Soluble			
Analysis Batch: 50526									
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	<5.00	U	5.00	mg/Kg			04/06/23 15:05	1	

QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-50413/2-A

Matrix: Solid

Analysis Batch: 50526

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	248.3		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-50413/3-A

Matrix: Solid

Analysis Batch: 50526

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	249.2		mg/Kg		100	90 - 110	0	20

Lab Sample ID: MB 880-50414/1-A

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/07/23 00:00	1

Lab Sample ID: LCS 880-50414/2-A

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	249.9		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-50414/3-A

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	250.6		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 880-26509-5 MS

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: SS05

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	63.7	F1	248	269.3	F1	mg/Kg		83	90 - 110

Lab Sample ID: 880-26509-5 MSD

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: SS05

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	63.7	F1	248	268.6	F1	mg/Kg		83	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

GC VOA

Prep Batch: 50191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-1	SS01	Total/NA	Solid	5035	
880-26509-2	SS02	Total/NA	Solid	5035	
880-26509-3	SS03	Total/NA	Solid	5035	
880-26509-4	SS04	Total/NA	Solid	5035	
880-26509-5	SS05	Total/NA	Solid	5035	
MB 880-50191/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-50191/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-50191/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 50285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-1	SS01	Total/NA	Solid	8021B	50191
880-26509-2	SS02	Total/NA	Solid	8021B	50191
880-26509-3	SS03	Total/NA	Solid	8021B	50191
880-26509-4	SS04	Total/NA	Solid	8021B	50191
880-26509-5	SS05	Total/NA	Solid	8021B	50191
MB 880-50191/5-A	Method Blank	Total/NA	Solid	8021B	50191
LCS 880-50191/1-A	Lab Control Sample	Total/NA	Solid	8021B	50191
LCSD 880-50191/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	50191

Analysis Batch: 50325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-1	SS01	Total/NA	Solid	Total BTEX	
880-26509-2	SS02	Total/NA	Solid	Total BTEX	
880-26509-3	SS03	Total/NA	Solid	Total BTEX	
880-26509-4	SS04	Total/NA	Solid	Total BTEX	
880-26509-5	SS05	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 49995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-1	SS01	Total/NA	Solid	8015B NM	50011
880-26509-2	SS02	Total/NA	Solid	8015B NM	50011
880-26509-3	SS03	Total/NA	Solid	8015B NM	50011
880-26509-4	SS04	Total/NA	Solid	8015B NM	50011
880-26509-5	SS05	Total/NA	Solid	8015B NM	50011
MB 880-50011/1-A	Method Blank	Total/NA	Solid	8015B NM	50011
LCS 880-50011/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	50011
LCSD 880-50011/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	50011

Prep Batch: 50011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-1	SS01	Total/NA	Solid	8015NM Prep	
880-26509-2	SS02	Total/NA	Solid	8015NM Prep	
880-26509-3	SS03	Total/NA	Solid	8015NM Prep	
880-26509-4	SS04	Total/NA	Solid	8015NM Prep	
880-26509-5	SS05	Total/NA	Solid	8015NM Prep	
MB 880-50011/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-50011/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-50011/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

GC Semi VOA

Analysis Batch: 50206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-1	SS01	Total/NA	Solid	8015 NM	
880-26509-2	SS02	Total/NA	Solid	8015 NM	
880-26509-3	SS03	Total/NA	Solid	8015 NM	
880-26509-4	SS04	Total/NA	Solid	8015 NM	
880-26509-5	SS05	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 50413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-1	SS01	Soluble	Solid	DI Leach	
880-26509-2	SS02	Soluble	Solid	DI Leach	
880-26509-3	SS03	Soluble	Solid	DI Leach	
880-26509-4	SS04	Soluble	Solid	DI Leach	
MB 880-50413/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-50413/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-50413/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 50414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-5	SS05	Soluble	Solid	DI Leach	
MB 880-50414/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-50414/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-50414/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-26509-5 MS	SS05	Soluble	Solid	DI Leach	
880-26509-5 MSD	SS05	Soluble	Solid	DI Leach	

Analysis Batch: 50526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-1	SS01	Soluble	Solid	300.0	50413
880-26509-2	SS02	Soluble	Solid	300.0	50413
880-26509-3	SS03	Soluble	Solid	300.0	50413
880-26509-4	SS04	Soluble	Solid	300.0	50413
MB 880-50413/1-A	Method Blank	Soluble	Solid	300.0	50413
LCS 880-50413/2-A	Lab Control Sample	Soluble	Solid	300.0	50413
LCSD 880-50413/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	50413

Analysis Batch: 50612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26509-5	SS05	Soluble	Solid	300.0	50414
MB 880-50414/1-A	Method Blank	Soluble	Solid	300.0	50414
LCS 880-50414/2-A	Lab Control Sample	Soluble	Solid	300.0	50414
LCSD 880-50414/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	50414
880-26509-5 MS	SS05	Soluble	Solid	300.0	50414
880-26509-5 MSD	SS05	Soluble	Solid	300.0	50414

Lab Chronicle

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Client Sample ID: SS01
Date Collected: 03/23/23 14:00
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26509-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50191	MNR	EET MID	04/03/23 12:30
Total/NA	Analysis	8021B		1	50285	MNR	EET MID	04/04/23 11:30
Total/NA	Analysis	Total BTEX		1	50325	SM	EET MID	04/04/23 15:09
Total/NA	Analysis	8015 NM		1	50206	SM	EET MID	04/03/23 14:09
Total/NA	Prep	8015NM Prep			50011	AJ	EET MID	03/31/23 09:25
Total/NA	Analysis	8015B NM		1	49995	SM	EET MID	04/01/23 04:22
Soluble	Leach	DI Leach			50413	KS	EET MID	04/05/23 14:42
Soluble	Analysis	300.0		1	50526	SMC	EET MID	04/06/23 17:16

Client Sample ID: SS02
Date Collected: 03/23/23 14:05
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26509-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50191	MNR	EET MID	04/03/23 12:30
Total/NA	Analysis	8021B		1	50285	MNR	EET MID	04/04/23 11:51
Total/NA	Analysis	Total BTEX		1	50325	SM	EET MID	04/04/23 15:09
Total/NA	Analysis	8015 NM		1	50206	SM	EET MID	04/03/23 14:09
Total/NA	Prep	8015NM Prep			50011	AJ	EET MID	03/31/23 09:25
Total/NA	Analysis	8015B NM		1	49995	SM	EET MID	04/01/23 04:44
Soluble	Leach	DI Leach			50413	KS	EET MID	04/05/23 14:42
Soluble	Analysis	300.0		1	50526	SMC	EET MID	04/06/23 17:21

Client Sample ID: SS03
Date Collected: 03/23/23 14:10
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26509-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50191	MNR	EET MID	04/03/23 12:30
Total/NA	Analysis	8021B		1	50285	MNR	EET MID	04/04/23 15:37
Total/NA	Analysis	Total BTEX		1	50325	SM	EET MID	04/05/23 11:07
Total/NA	Analysis	8015 NM		1	50206	SM	EET MID	04/03/23 14:09
Total/NA	Prep	8015NM Prep			50011	AJ	EET MID	03/31/23 09:25
Total/NA	Analysis	8015B NM		1	49995	SM	EET MID	04/01/23 05:05
Soluble	Leach	DI Leach			50413	KS	EET MID	04/05/23 14:42
Soluble	Analysis	300.0		1	50526	SMC	EET MID	04/06/23 17:26

Client Sample ID: SS04
Date Collected: 03/23/23 14:15
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26509-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50191	MNR	EET MID	04/03/23 12:30
Total/NA	Analysis	8021B		1	50285	MNR	EET MID	04/04/23 16:18
Total/NA	Analysis	Total BTEX		1	50325	SM	EET MID	04/05/23 11:07

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Client Sample ID: SS04
Date Collected: 03/23/23 14:15
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26509-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 NM		1	50206	SM	EET MID	04/03/23 14:09
Total/NA	Prep	8015NM Prep			50011	AJ	EET MID	03/31/23 09:25
Total/NA	Analysis	8015B NM		1	49995	SM	EET MID	04/01/23 05:26
Soluble	Leach	DI Leach			50413	KS	EET MID	04/05/23 14:42
Soluble	Analysis	300.0		1	50526	SMC	EET MID	04/06/23 17:30

Client Sample ID: SS05
Date Collected: 03/23/23 14:25
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26509-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50191	MNR	EET MID	04/03/23 12:30
Total/NA	Analysis	8021B		1	50285	MNR	EET MID	04/04/23 16:38
Total/NA	Analysis	Total BTEX		1	50325	SM	EET MID	04/05/23 11:07
Total/NA	Analysis	8015 NM		1	50206	SM	EET MID	04/03/23 14:09
Total/NA	Prep	8015NM Prep			50011	AJ	EET MID	03/31/23 09:25
Total/NA	Analysis	8015B NM		1	49995	SM	EET MID	04/01/23 05:47
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 00:14

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26509-1
SDG: 03D2057064

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-26509-1	SS01	Solid	03/23/23 14:00	03/28/23 07:58	0.5'
880-26509-2	SS02	Solid	03/23/23 14:05	03/28/23 07:58	0.5'
880-26509-3	SS03	Solid	03/23/23 14:10	03/28/23 07:58	0.5'
880-26509-4	SS04	Solid	03/23/23 14:15	03/28/23 07:58	0.5'
880-26509-5	SS05	Solid	03/23/23 14:25	03/28/23 07:58	0.5'

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Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-26509-1

SDG Number: 03D2057064

Login Number: 26509
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701
Generated 4/8/2023 8:48:51 AM

JOB DESCRIPTION

MCA 254
SDG NUMBER 03D2057064

JOB NUMBER

880-26511-1


Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

Eurofins Midland

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
4/8/2023 8:48:51 AM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: MCA 254

Laboratory Job ID: 880-26511-1
SDG: 03D2057064

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Definitions/Glossary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Job ID: 880-26511-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-26511-1

Receipt

The samples were received on 3/28/2023 7:58 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-50191 and analytical batch 880-50285 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-50426/5-A). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-50047 and analytical batch 880-50077 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: BH03A (880-26511-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: BH05A (880-26511-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH06A (880-26511-11) and BH06C (880-26511-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-50415 and analytical batch 880-50611 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.BH06C (880-26511-12), BH07A (880-26511-13), BH07C (880-26511-14), (880-26511-A-12-C MS) and (880-26511-A-12-D MSD)

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-50414 and analytical batch 880-50612 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.BH01A (880-26511-1)

Method 300_ORGFM_28D: The matrix spike and matrix spike duplicate were prepared at 45ppm.(880-26511-A-2-D MS) and (880-26511-A-2-E MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH01A
Date Collected: 03/22/23 09:40
Date Received: 03/28/23 07:58
Sample Depth: 1'

Lab Sample ID: 880-26511-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 03:28	1	
Toluene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 03:28	1	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 03:28	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/03/23 12:22	04/04/23 03:28	1	
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 03:28	1	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/03/23 12:22	04/04/23 03:28	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil	Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			04/03/23 12:22	04/04/23 03:28	1	
1,4-Difluorobenzene (Surr)	84		70 - 130			04/03/23 12:22	04/04/23 03:28	1	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/04/23 10:41	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/03/23 14:32	1	

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 11:38	1	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 11:38	1	
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 11:38	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil	Fac
1-Chlorooctane	108		70 - 130			03/31/23 14:31	04/01/23 11:38	1	
o-Terphenyl	128		70 - 130			03/31/23 14:31	04/01/23 11:38	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Chloride	23.2		4.98	mg/Kg			04/07/23 01:17	1	

Client Sample ID: BH01C
Date Collected: 03/22/23 10:30
Date Received: 03/28/23 07:58
Sample Depth: 3'

Lab Sample ID: 880-26511-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 03:48	1	
Toluene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 03:48	1	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 03:48	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/03/23 12:22	04/04/23 03:48	1	
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 03:48	1	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/03/23 12:22	04/04/23 03:48	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil	Fac
4-Bromofluorobenzene (Surr)	92		70 - 130			04/03/23 12:22	04/04/23 03:48	1	

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH01C

Lab Sample ID: 880-26511-2

Date Collected: 03/22/23 10:30

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 3'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	94		70 - 130	04/03/23 12:22	04/04/23 03:48	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/04/23 10:41	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			04/03/23 14:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 12:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 12:44	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 12:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130			03/31/23 14:31	04/01/23 12:44	1
o-Terphenyl	119		70 - 130			03/31/23 14:31	04/01/23 12:44	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	440		5.04	mg/Kg			04/07/23 01:22	1

Client Sample ID: BH02A

Lab Sample ID: 880-26511-3

Date Collected: 03/22/23 11:00

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 1'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 04:08	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 04:08	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 04:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/03/23 12:22	04/04/23 04:08	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/03/23 12:22	04/04/23 04:08	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/03/23 12:22	04/04/23 04:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130	04/03/23 12:22	04/04/23 04:08	1
1,4-Difluorobenzene (Surr)	92		70 - 130	04/03/23 12:22	04/04/23 04:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/04/23 10:41	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/03/23 14:32	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH02A

Lab Sample ID: 880-26511-3

Date Collected: 03/22/23 11:00

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 1'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 13:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 13:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 13:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130			03/31/23 14:31	04/01/23 13:06	1
o-Terphenyl	127		70 - 130			03/31/23 14:31	04/01/23 13:06	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	845		4.97	mg/Kg			04/07/23 01:37	1

Client Sample ID: BH02C

Lab Sample ID: 880-26511-4

Date Collected: 03/22/23 11:20

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 3'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 04:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 04:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 04:29	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/03/23 12:22	04/04/23 04:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 04:29	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/03/23 12:22	04/04/23 04:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			04/03/23 12:22	04/04/23 04:29	1
1,4-Difluorobenzene (Surr)	78		70 - 130			04/03/23 12:22	04/04/23 04:29	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			04/04/23 10:41	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			04/03/23 14:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		03/31/23 14:31	04/01/23 13:27	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		03/31/23 14:31	04/01/23 13:27	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/31/23 14:31	04/01/23 13:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130			03/31/23 14:31	04/01/23 13:27	1
o-Terphenyl	120		70 - 130			03/31/23 14:31	04/01/23 13:27	1

Eurofins Midland

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH02C
Date Collected: 03/22/23 11:20
Date Received: 03/28/23 07:58
Sample Depth: 3'

Lab Sample ID: 880-26511-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	199		4.99	mg/Kg			04/07/23 01:42	1	

Client Sample ID: BH03A
Date Collected: 03/22/23 12:30
Date Received: 03/28/23 07:58
Sample Depth: 1'

Lab Sample ID: 880-26511-5
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 04:49	1	
Toluene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 04:49	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 04:49	1	
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/03/23 12:22	04/04/23 04:49	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 04:49	1	
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/03/23 12:22	04/04/23 04:49	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		70 - 130			04/03/23 12:22	04/04/23 04:49	1	
1,4-Difluorobenzene (Surr)	77		70 - 130			04/03/23 12:22	04/04/23 04:49	1	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00399	U	0.00399	mg/Kg			04/04/23 10:41	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.9	U	49.9	mg/Kg			04/03/23 14:32	1	

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 13:49	1	
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 13:49	1	
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 13:49	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	120		70 - 130			03/31/23 14:31	04/01/23 13:49	1	
o-Terphenyl	136	S1+	70 - 130			03/31/23 14:31	04/01/23 13:49	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	286		5.00	mg/Kg			04/07/23 01:56	1	

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH03C
Date Collected: 03/22/23 12:50
Date Received: 03/28/23 07:58
Sample Depth: 3'

Lab Sample ID: 880-26511-6
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00201	U	0.00201	mg/Kg		04/03/23 12:22	04/04/23 05:10	1	
Toluene	<0.00201	U	0.00201	mg/Kg		04/03/23 12:22	04/04/23 05:10	1	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/03/23 12:22	04/04/23 05:10	1	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/03/23 12:22	04/04/23 05:10	1	
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/03/23 12:22	04/04/23 05:10	1	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/03/23 12:22	04/04/23 05:10	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		70 - 130			04/03/23 12:22	04/04/23 05:10	1	
1,4-Difluorobenzene (Surr)	90		70 - 130			04/03/23 12:22	04/04/23 05:10	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/04/23 10:41	1	
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.8	U	49.8	mg/Kg			04/03/23 14:32	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		03/31/23 14:31	04/01/23 14:11	1	
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		03/31/23 14:31	04/01/23 14:11	1	
Oil Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		03/31/23 14:31	04/01/23 14:11	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	101		70 - 130			03/31/23 14:31	04/01/23 14:11	1	
o-Terphenyl	121		70 - 130			03/31/23 14:31	04/01/23 14:11	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	866		4.99	mg/Kg			04/07/23 02:01	1	

Client Sample ID: BH04A
Date Collected: 03/23/23 13:00
Date Received: 03/28/23 07:58
Sample Depth: 1'

Lab Sample ID: 880-26511-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 05:30	1	
Toluene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 05:30	1	
Ethylbenzene	0.00359		0.00200	mg/Kg		04/03/23 12:22	04/04/23 05:30	1	
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/03/23 12:22	04/04/23 05:30	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/04/23 05:30	1	
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/03/23 12:22	04/04/23 05:30	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		70 - 130			04/03/23 12:22	04/04/23 05:30	1	

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Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH04A
Date Collected: 03/23/23 13:00
Date Received: 03/28/23 07:58
Sample Depth: 1'

Lab Sample ID: 880-26511-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1,4-Difluorobenzene (Surr)	92		70 - 130			04/03/23 12:22	04/04/23 05:30	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00401	U	0.00401	mg/Kg			04/04/23 10:41	1	
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	281		49.9	mg/Kg			04/03/23 14:32	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 14:32	1	
Diesel Range Organics (Over C10-C28)	185		49.9	mg/Kg		03/31/23 14:31	04/01/23 14:32	1	
Oil Range Organics (Over C28-C36)	96.2		49.9	mg/Kg		03/31/23 14:31	04/01/23 14:32	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	106		70 - 130			03/31/23 14:31	04/01/23 14:32	1	
o-Terphenyl	127		70 - 130			03/31/23 14:31	04/01/23 14:32	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	2940		25.1	mg/Kg			04/07/23 02:06	5	

Client Sample ID: BH04C
Date Collected: 03/23/23 13:20
Date Received: 03/28/23 07:58
Sample Depth: 3'

Lab Sample ID: 880-26511-8
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00201	U	0.00201	mg/Kg		04/03/23 12:30	04/04/23 11:09	1	
Toluene	<0.00201	U	0.00201	mg/Kg		04/03/23 12:30	04/04/23 11:09	1	
Ethylbenzene	0.00387	F1	0.00201	mg/Kg		04/03/23 12:30	04/04/23 11:09	1	
m-Xylene & p-Xylene	<0.00402	U F1	0.00402	mg/Kg		04/03/23 12:30	04/04/23 11:09	1	
o-Xylene	<0.00201	U F1	0.00201	mg/Kg		04/03/23 12:30	04/04/23 11:09	1	
Xylenes, Total	<0.00402	U F1	0.00402	mg/Kg		04/03/23 12:30	04/04/23 11:09	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		70 - 130			04/03/23 12:30	04/04/23 11:09	1	
1,4-Difluorobenzene (Surr)	110		70 - 130			04/03/23 12:30	04/04/23 11:09	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/04/23 15:09	1	

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH04C

Lab Sample ID: 880-26511-8

Date Collected: 03/23/23 13:20

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 3'

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	206		49.9	mg/Kg			04/03/23 14:32	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/31/23 14:31	04/01/23 14:54	1	
Diesel Range Organics (Over C10-C28)	132		49.9	mg/Kg		03/31/23 14:31	04/01/23 14:54	1	
Oil Range Organics (Over C28-C36)	73.6		49.9	mg/Kg		03/31/23 14:31	04/01/23 14:54	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	102		70 - 130			03/31/23 14:31	04/01/23 14:54	1	
o-Terphenyl	123		70 - 130			03/31/23 14:31	04/01/23 14:54	1	
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	99.7		4.97	mg/Kg			04/07/23 02:11	1	

Client Sample ID: BH05A

Lab Sample ID: 880-26511-9

Date Collected: 03/27/23 09:20

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 1'

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00202	U	0.00202	mg/Kg		04/05/23 16:16	04/06/23 16:16	1	
Toluene	<0.00202	U	0.00202	mg/Kg		04/05/23 16:16	04/06/23 16:16	1	
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		04/05/23 16:16	04/06/23 16:16	1	
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		04/05/23 16:16	04/06/23 16:16	1	
o-Xylene	<0.00202	U	0.00202	mg/Kg		04/05/23 16:16	04/06/23 16:16	1	
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		04/05/23 16:16	04/06/23 16:16	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	100		70 - 130			04/05/23 16:16	04/06/23 16:16	1	
1,4-Difluorobenzene (Surr)	81		70 - 130			04/05/23 16:16	04/06/23 16:16	1	
Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00403	U	0.00403	mg/Kg			04/08/23 09:11	1	
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<50.0	U	50.0	mg/Kg			04/03/23 14:32	1	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 15:16	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 15:16	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 15:16	1	

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Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH05A

Lab Sample ID: 880-26511-9

Date Collected: 03/27/23 09:20

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 1'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130	03/31/23 14:31	04/01/23 15:16	1
o-Terphenyl	135	S1+	70 - 130	03/31/23 14:31	04/01/23 15:16	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	198		4.96	mg/Kg			04/07/23 02:15	1

Client Sample ID: BH05C

Lab Sample ID: 880-26511-10

Date Collected: 03/27/23 09:40

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 3'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/05/23 16:16	04/06/23 16:43	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/05/23 16:16	04/06/23 16:43	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/05/23 16:16	04/06/23 16:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/05/23 16:16	04/06/23 16:43	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/05/23 16:16	04/06/23 16:43	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/05/23 16:16	04/06/23 16:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130	04/05/23 16:16	04/06/23 16:43	1
1,4-Difluorobenzene (Surr)	86		70 - 130	04/05/23 16:16	04/06/23 16:43	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/08/23 09:11	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/03/23 14:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 15:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 15:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 15:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130	03/31/23 14:31	04/01/23 15:38	1
o-Terphenyl	121		70 - 130	03/31/23 14:31	04/01/23 15:38	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.5		4.95	mg/Kg			04/07/23 02:20	1

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Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH06A
Date Collected: 03/27/23 10:00
Date Received: 03/28/23 07:58
Sample Depth: 1'

Lab Sample ID: 880-26511-11
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00199	U	0.00199	mg/Kg		04/05/23 16:16	04/06/23 17:09	1	
Toluene	<0.00199	U	0.00199	mg/Kg		04/05/23 16:16	04/06/23 17:09	1	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/05/23 16:16	04/06/23 17:09	1	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/05/23 16:16	04/06/23 17:09	1	
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/05/23 16:16	04/06/23 17:09	1	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/05/23 16:16	04/06/23 17:09	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	118		70 - 130			04/05/23 16:16	04/06/23 17:09	1	
1,4-Difluorobenzene (Surr)	84		70 - 130			04/05/23 16:16	04/06/23 17:09	1	

Method: TAL SOP Total BTEX - Total BTEX Calculation									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total BTEX	<0.00398	U	0.00398	mg/Kg			04/08/23 09:11	1	

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	631		49.8	mg/Kg			04/03/23 14:32	1	

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		03/31/23 14:31	04/01/23 16:21	1	
Diesel Range Organics (Over C10-C28)	414		49.8	mg/Kg		03/31/23 14:31	04/01/23 16:21	1	
Oil Range Organics (Over C28-C36)	217		49.8	mg/Kg		03/31/23 14:31	04/01/23 16:21	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
1-Chlorooctane	121		70 - 130			03/31/23 14:31	04/01/23 16:21	1	
o-Terphenyl	137	S1+	70 - 130			03/31/23 14:31	04/01/23 16:21	1	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	209		25.2	mg/Kg			04/07/23 17:00	5	

Client Sample ID: BH06C
Date Collected: 03/27/23 10:20
Date Received: 03/28/23 07:58
Sample Depth: 3'

Lab Sample ID: 880-26511-12
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 17:36	1	
Toluene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 17:36	1	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 17:36	1	
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		04/05/23 16:16	04/06/23 17:36	1	
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 17:36	1	
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		04/05/23 16:16	04/06/23 17:36	1	

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH06C
Date Collected: 03/27/23 10:20
Date Received: 03/28/23 07:58
Sample Depth: 3'

Lab Sample ID: 880-26511-12
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130			04/05/23 16:16	04/06/23 17:36	1
1,4-Difluorobenzene (Surr)	83		70 - 130			04/05/23 16:16	04/06/23 17:36	1
Method: TAL SOP Total BTEX - Total BTEX Calculation								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			04/08/23 09:11	1
Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	236		50.0	mg/Kg			04/03/23 14:32	1
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 16:43	1
Diesel Range Organics (Over C10-C28)	163		50.0	mg/Kg		03/31/23 14:31	04/01/23 16:43	1
Oil Range Organics (Over C28-C36)	73.2		50.0	mg/Kg		03/31/23 14:31	04/01/23 16:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130			03/31/23 14:31	04/01/23 16:43	1
o-Terphenyl	143	S1+	70 - 130			03/31/23 14:31	04/01/23 16:43	1
Method: EPA 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	480	F1	5.04	mg/Kg			04/06/23 21:39	1

Client Sample ID: BH07A
Date Collected: 03/27/23 10:40
Date Received: 03/28/23 07:58
Sample Depth: 1'

Lab Sample ID: 880-26511-13
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		04/05/23 16:16	04/06/23 18:02	1
Toluene	<0.00201	U	0.00201	mg/Kg		04/05/23 16:16	04/06/23 18:02	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		04/05/23 16:16	04/06/23 18:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		04/05/23 16:16	04/06/23 18:02	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		04/05/23 16:16	04/06/23 18:02	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		04/05/23 16:16	04/06/23 18:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130			04/05/23 16:16	04/06/23 18:02	1
1,4-Difluorobenzene (Surr)	81		70 - 130			04/05/23 16:16	04/06/23 18:02	1
Method: TAL SOP Total BTEX - Total BTEX Calculation								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/08/23 09:11	1

Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH07A

Lab Sample ID: 880-26511-13

Date Collected: 03/27/23 10:40

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 1'

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/03/23 14:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 17:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 17:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 17:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130			03/31/23 14:31	04/01/23 17:48	1
o-Terphenyl	129		70 - 130			03/31/23 14:31	04/01/23 17:48	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	665		5.05	mg/Kg			04/06/23 21:54	1

Client Sample ID: BH07C

Lab Sample ID: 880-26511-14

Date Collected: 03/27/23 11:00

Matrix: Solid

Date Received: 03/28/23 07:58

Sample Depth: 3'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 18:29	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 18:29	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 18:29	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		04/05/23 16:16	04/06/23 18:29	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 18:29	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		04/05/23 16:16	04/06/23 18:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130			04/05/23 16:16	04/06/23 18:29	1
1,4-Difluorobenzene (Surr)	88		70 - 130			04/05/23 16:16	04/06/23 18:29	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			04/08/23 09:11	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			04/03/23 14:32	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 18:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 18:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 18:10	1

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Client Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH07C
Date Collected: 03/27/23 11:00
Date Received: 03/28/23 07:58
Sample Depth: 3'

Lab Sample ID: 880-26511-14
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	03/31/23 14:31	04/01/23 18:10	1
o-Terphenyl	127		70 - 130	03/31/23 14:31	04/01/23 18:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	668		5.02	mg/Kg			04/06/23 21:59	1	

Surrogate Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	BFB1	DFBZ1				
		(70-130)	(70-130)				
880-26511-1	BH01A	109	84				
880-26511-2	BH01C	92	94				
880-26511-3	BH02A	92	92				
880-26511-4	BH02C	108	78				
880-26511-5	BH03A	92	77				
880-26511-6	BH03C	90	90				
880-26511-7	BH04A	92	92				
880-26511-8	BH04C	90	110				
880-26511-8 MS	BH04C	91	110				
880-26511-8 MSD	BH04C	113	115				
880-26511-9	BH05A	100	81				
880-26511-9 MS	BH05A	102	103				
880-26511-9 MSD	BH05A	99	110				
880-26511-10	BH05C	118	86				
880-26511-11	BH06A	118	84				
880-26511-12	BH06C	117	83				
880-26511-13	BH07A	128	81				
880-26511-14	BH07C	114	88				
LCS 880-50190/1-A	Lab Control Sample	111	103				
LCS 880-50191/1-A	Lab Control Sample	84	114				
LCS 880-50426/1-A	Lab Control Sample	102	112				
LCSD 880-50190/2-A	Lab Control Sample Dup	106	107				
LCSD 880-50191/2-A	Lab Control Sample Dup	101	110				
LCSD 880-50426/2-A	Lab Control Sample Dup	107	100				
MB 880-50130/5-A	Method Blank	77	97				
MB 880-50190/5-A	Method Blank	80	96				
MB 880-50191/5-A	Method Blank	79	95				
MB 880-50426/5-A	Method Blank	67 S1-	84				
Surrogate Legend							
BFB = 4-Bromofluorobenzene (Surr)							
DFBZ = 1,4-Difluorobenzene (Surr)							

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	1CO1	OTPH1				
		(70-130)	(70-130)				
880-26511-1	BH01A	108	128				
880-26511-1 MS	BH01A	112	115				
880-26511-1 MSD	BH01A	108	112				
880-26511-2	BH01C	101	119				
880-26511-3	BH02A	117	127				
880-26511-4	BH02C	101	120				
880-26511-5	BH03A	120	136 S1+				
880-26511-6	BH03C	101	121				
880-26511-7	BH04A	106	127				
880-26511-8	BH04C	102	123				
880-26511-9	BH05A	119	135 S1+				

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Surrogate Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-26511-10	BH05C	102	121
880-26511-11	BH06A	121	137 S1+
880-26511-12	BH06C	124	143 S1+
880-26511-13	BH07A	114	129
880-26511-14	BH07C	106	127
LCS 880-50047/2-A	Lab Control Sample	109	127
LCSD 880-50047/3-A	Lab Control Sample Dup	111	129
MB 880-50047/1-A	Method Blank	140 S1+	165 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-50130/5-A						Client Sample ID: Method Blank		
Matrix: Solid						Prep Type: Total/NA		
Analysis Batch: 50119						Prep Batch: 50130		
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
Toluene	<0.00199	U	0.00199	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		04/03/23 08:39	04/03/23 11:01	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		70 - 130			04/03/23 08:39	04/03/23 11:01	1
1,4-Difluorobenzene (Surr)	97		70 - 130			04/03/23 08:39	04/03/23 11:01	1

Lab Sample ID: MB 880-50190/5-A						Client Sample ID: Method Blank		
Matrix: Solid						Prep Type: Total/NA		
Analysis Batch: 50119						Prep Batch: 50190		
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/03/23 21:38	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/03/23 21:38	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/03/23 21:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/03/23 12:22	04/03/23 21:38	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:22	04/03/23 21:38	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/03/23 12:22	04/03/23 21:38	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130			04/03/23 12:22	04/03/23 21:38	1
1,4-Difluorobenzene (Surr)	96		70 - 130			04/03/23 12:22	04/03/23 21:38	1

Lab Sample ID: LCS 880-50190/1-A						Client Sample ID: Lab Control Sample		
Matrix: Solid						Prep Type: Total/NA		
Analysis Batch: 50119						Prep Batch: 50190		
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene	0.100	0.1000		mg/Kg		100	70 - 130	
Toluene	0.100	0.09798		mg/Kg		98	70 - 130	
Ethylbenzene	0.100	0.09773		mg/Kg		98	70 - 130	
m-Xylene & p-Xylene	0.200	0.2101		mg/Kg		105	70 - 130	
o-Xylene	0.100	0.1071		mg/Kg		107	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)	111		70 - 130					
1,4-Difluorobenzene (Surr)	103		70 - 130					

Lab Sample ID: LCSD 880-50190/2-A						Client Sample ID: Lab Control Sample Dup		
Matrix: Solid						Prep Type: Total/NA		
Analysis Batch: 50119						Prep Batch: 50190		
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD Limit
Benzene	0.100	0.1016		mg/Kg		102	70 - 130	2 35

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QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-50190/2-A
Matrix: Solid
Analysis Batch: 50119

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 50190

Analyte	Spike		LCSD		Unit	D	%Rec	%Rec		RPD
	Added	Result	Qualifier	Limit				Limits	RPD	
Toluene	0.100	0.09788			mg/Kg		98	70 - 130	0	35
Ethylbenzene	0.100	0.09718			mg/Kg		97	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2084			mg/Kg		104	70 - 130	1	35
o-Xylene	0.100	0.1061			mg/Kg		106	70 - 130	1	35

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: MB 880-50191/5-A
Matrix: Solid
Analysis Batch: 50285

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50191

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:30	04/04/23 10:48	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:30	04/04/23 10:48	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:30	04/04/23 10:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/03/23 12:30	04/04/23 10:48	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/03/23 12:30	04/04/23 10:48	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/03/23 12:30	04/04/23 10:48	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	79		70 - 130	04/03/23 12:30	04/04/23 10:48	1
1,4-Difluorobenzene (Surr)	95		70 - 130	04/03/23 12:30	04/04/23 10:48	1

Lab Sample ID: LCS 880-50191/1-A
Matrix: Solid
Analysis Batch: 50285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50191

Analyte	Spike		LCS		Unit	D	%Rec	%Rec	
	Added	Result	Qualifier	Limit				Limits	RPD
Benzene	0.100	0.1268			mg/Kg		127	70 - 130	
Toluene	0.100	0.1053			mg/Kg		105	70 - 130	
Ethylbenzene	0.100	0.09615			mg/Kg		96	70 - 130	
m-Xylene & p-Xylene	0.200	0.1915			mg/Kg		96	70 - 130	
o-Xylene	0.100	0.09559			mg/Kg		96	70 - 130	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	84		70 - 130
1,4-Difluorobenzene (Surr)	114		70 - 130

Lab Sample ID: LCSD 880-50191/2-A
Matrix: Solid
Analysis Batch: 50285

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 50191

Analyte	Spike		LCSD		Unit	D	%Rec	%Rec		RPD
	Added	Result	Qualifier	Limit				Limits	RPD	
Benzene	0.100	0.1148			mg/Kg		115	70 - 130	10	35
Toluene	0.100	0.1049			mg/Kg		105	70 - 130	0	35
Ethylbenzene	0.100	0.1016			mg/Kg		102	70 - 130	6	35

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QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-50191/2-A

Matrix: Solid

Analysis Batch: 50285

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 50191

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
m-Xylene & p-Xylene	0.200	0.2112		mg/Kg		106	70 - 130	10		35
o-Xylene	0.100	0.1057		mg/Kg		106	70 - 130	10		35

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: 880-26511-8 MS

Matrix: Solid

Analysis Batch: 50285

Client Sample ID: BH04C

Prep Type: Total/NA

Prep Batch: 50191

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	RPD
Benzene	<0.00201	U	0.101	0.09221		mg/Kg		91	70 - 130	
Toluene	<0.00201	U	0.101	0.07529		mg/Kg		73	70 - 130	
Ethylbenzene	0.00387	F1	0.101	0.06979	F1	mg/Kg		65	70 - 130	
m-Xylene & p-Xylene	<0.00402	U F1	0.202	0.1324	F1	mg/Kg		64	70 - 130	
o-Xylene	<0.00201	U F1	0.101	0.06655	F1	mg/Kg		64	70 - 130	

Surrogate	MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	91		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: 880-26511-8 MSD

Matrix: Solid

Analysis Batch: 50285

Client Sample ID: BH04C

Prep Type: Total/NA

Prep Batch: 50191

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits	RPD		
Benzene	<0.00201	U	0.0990	0.1029		mg/Kg		104	70 - 130	11		35
Toluene	<0.00201	U	0.0990	0.08470		mg/Kg		84	70 - 130	12		35
Ethylbenzene	0.00387	F1	0.0990	0.08179		mg/Kg		79	70 - 130	16		35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1626		mg/Kg		80	70 - 130	20		35
o-Xylene	<0.00201	U F1	0.0990	0.08189		mg/Kg		81	70 - 130	21		35

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	115		70 - 130

Lab Sample ID: MB 880-50426/5-A

Matrix: Solid

Analysis Batch: 50521

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 50426

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Benzene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 15:50	1
Toluene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 15:50	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 15:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		04/05/23 16:16	04/06/23 15:50	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		04/05/23 16:16	04/06/23 15:50	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		04/05/23 16:16	04/06/23 15:50	1

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QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	67	S1-	70 - 130	04/05/23 16:16	04/06/23 15:50	1
1,4-Difluorobenzene (Surr)	84		70 - 130	04/05/23 16:16	04/06/23 15:50	1

Lab Sample ID: LCS 880-50426/1-A

Matrix: Solid

Analysis Batch: 50521

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 50426

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Benzene	0.100	0.1123		mg/Kg		112	70 - 130	
Toluene	0.100	0.1168		mg/Kg		117	70 - 130	
Ethylbenzene	0.100	0.1113		mg/Kg		111	70 - 130	
m-Xylene & p-Xylene	0.200	0.2183		mg/Kg		109	70 - 130	
o-Xylene	0.100	0.1108		mg/Kg		111	70 - 130	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: LCSD 880-50426/2-A

Matrix: Solid

Analysis Batch: 50521

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 50426

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	
							Limits		RPD	Limit
Benzene	0.100	0.1186		mg/Kg		119	70 - 130		5	35
Toluene	0.100	0.1165		mg/Kg		117	70 - 130		0	35
Ethylbenzene	0.100	0.1101		mg/Kg		110	70 - 130		1	35
m-Xylene & p-Xylene	0.200	0.2167		mg/Kg		108	70 - 130		1	35
o-Xylene	0.100	0.1102		mg/Kg		110	70 - 130		1	35

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 880-26511-9 MS

Matrix: Solid

Analysis Batch: 50521

Client Sample ID: BH05A

Prep Type: Total/NA

Prep Batch: 50426

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	
Benzene	<0.00202	U	0.0998	0.1142		mg/Kg		114	70 - 130	
Toluene	<0.00202	U	0.0998	0.1169		mg/Kg		117	70 - 130	
Ethylbenzene	<0.00202	U	0.0998	0.1110		mg/Kg		111	70 - 130	
m-Xylene & p-Xylene	<0.00403	U	0.200	0.2143		mg/Kg		107	70 - 130	
o-Xylene	<0.00202	U	0.0998	0.1061		mg/Kg		106	70 - 130	

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-26511-9 MSD
Matrix: Solid
Analysis Batch: 50521

Client Sample ID: BH05A
Prep Type: Total/NA
Prep Batch: 50426

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.100	0.1084		mg/Kg		108	70 - 130	5	35
Toluene	<0.00202	U	0.100	0.1119		mg/Kg		112	70 - 130	4	35
Ethylbenzene	<0.00202	U	0.100	0.1042		mg/Kg		104	70 - 130	6	35
m-Xylene & p-Xylene	<0.00403	U	0.200	0.2028		mg/Kg		101	70 - 130	5	35
o-Xylene	<0.00202	U	0.100	0.1024		mg/Kg		102	70 - 130	4	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	99		70 - 130								
1,4-Difluorobenzene (Surr)	110		70 - 130								

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-50047/1-A
Matrix: Solid
Analysis Batch: 50077

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 50047

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 08:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 08:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/31/23 14:31	04/01/23 08:55	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac		
1-Chlorooctane	140	S1+	70 - 130	03/31/23 14:31	04/01/23 08:55	1		
o-Terphenyl	165	S1+	70 - 130	03/31/23 14:31	04/01/23 08:55	1		

Lab Sample ID: LCS 880-50047/2-A
Matrix: Solid
Analysis Batch: 50077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 50047

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD
Gasoline Range Organics (GRO)-C6-C10	1000	996.6		mg/Kg		100	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	826.0		mg/Kg		83	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
1-Chlorooctane	109		70 - 130					
o-Terphenyl	127		70 - 130					

Lab Sample ID: LCSD 880-50047/3-A
Matrix: Solid
Analysis Batch: 50077

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 50047

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	978.9		mg/Kg		98	70 - 130	2	20

QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 880-50047/3-A				Client Sample ID: Lab Control Sample Dup							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 50077				Prep Batch: 50047							
Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)			1000	820.9		mg/Kg		82	70 - 130	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
1-Chlorooctane	111		70 - 130								
o-Terphenyl	129		70 - 130								

Lab Sample ID: 880-26511-1 MS				Client Sample ID: BH01A							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 50077				Prep Batch: 50047							
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	1088		mg/Kg		106	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1266		mg/Kg		125	70 - 130		
Surrogate	MS %Recovery	MS Qualifier	Limits								
1-Chlorooctane	112		70 - 130								
o-Terphenyl	115		70 - 130								

Lab Sample ID: 880-26511-1 MSD				Client Sample ID: BH01A							
Matrix: Solid				Prep Type: Total/NA							
Analysis Batch: 50077				Prep Batch: 50047							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1068		mg/Kg		104	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1224		mg/Kg		121	70 - 130	3	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	108		70 - 130								
o-Terphenyl	112		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-50415/1-A				Client Sample ID: Method Blank							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 50611											
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Chloride	<5.00	U	5.00	mg/Kg			04/06/23 21:25	1			

Lab Sample ID: LCS 880-50415/2-A				Client Sample ID: Lab Control Sample							
Matrix: Solid				Prep Type: Soluble							
Analysis Batch: 50611											
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.7		mg/Kg		100	90 - 110		

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QC Sample Results

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCSD 880-50415/3-A

Matrix: Solid

Analysis Batch: 50611

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	250.9		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 880-26511-12 MS

Matrix: Solid

Analysis Batch: 50611

Client Sample ID: BH06C

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	480	F1	252	593.3	F1	mg/Kg		45	90 - 110

Lab Sample ID: 880-26511-12 MSD

Matrix: Solid

Analysis Batch: 50611

Client Sample ID: BH06C

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	480	F1	252	593.9	F1	mg/Kg		45	90 - 110	0	20

Lab Sample ID: MB 880-50414/1-A

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			04/07/23 00:00	1

Lab Sample ID: LCS 880-50414/2-A

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	249.9		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-50414/3-A

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	250.6		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 880-26511-2 MS

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: BH01C

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	440		454	901.0		mg/Kg		102	90 - 110

Lab Sample ID: 880-26511-2 MSD

Matrix: Solid

Analysis Batch: 50612

Client Sample ID: BH01C

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	440		454	900.9		mg/Kg		102	90 - 110	0	20

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QC Association Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

GC VOA

Analysis Batch: 50119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-1	BH01A	Total/NA	Solid	8021B	50190
880-26511-2	BH01C	Total/NA	Solid	8021B	50190
880-26511-3	BH02A	Total/NA	Solid	8021B	50190
880-26511-4	BH02C	Total/NA	Solid	8021B	50190
880-26511-5	BH03A	Total/NA	Solid	8021B	50190
880-26511-6	BH03C	Total/NA	Solid	8021B	50190
880-26511-7	BH04A	Total/NA	Solid	8021B	50190
MB 880-50130/5-A	Method Blank	Total/NA	Solid	8021B	50130
MB 880-50190/5-A	Method Blank	Total/NA	Solid	8021B	50190
LCS 880-50190/1-A	Lab Control Sample	Total/NA	Solid	8021B	50190
LCSD 880-50190/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	50190

Prep Batch: 50130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-50130/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 50190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-1	BH01A	Total/NA	Solid	5035	
880-26511-2	BH01C	Total/NA	Solid	5035	
880-26511-3	BH02A	Total/NA	Solid	5035	
880-26511-4	BH02C	Total/NA	Solid	5035	
880-26511-5	BH03A	Total/NA	Solid	5035	
880-26511-6	BH03C	Total/NA	Solid	5035	
880-26511-7	BH04A	Total/NA	Solid	5035	
MB 880-50190/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-50190/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-50190/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 50191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-8	BH04C	Total/NA	Solid	5035	
MB 880-50191/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-50191/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-50191/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-26511-8 MS	BH04C	Total/NA	Solid	5035	
880-26511-8 MSD	BH04C	Total/NA	Solid	5035	

Analysis Batch: 50285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-8	BH04C	Total/NA	Solid	8021B	50191
MB 880-50191/5-A	Method Blank	Total/NA	Solid	8021B	50191
LCS 880-50191/1-A	Lab Control Sample	Total/NA	Solid	8021B	50191
LCSD 880-50191/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	50191
880-26511-8 MS	BH04C	Total/NA	Solid	8021B	50191
880-26511-8 MSD	BH04C	Total/NA	Solid	8021B	50191

Analysis Batch: 50309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-1	BH01A	Total/NA	Solid	Total BTEX	
880-26511-2	BH01C	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

GC VOA (Continued)

Analysis Batch: 50309 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-3	BH02A	Total/NA	Solid	Total BTEX	
880-26511-4	BH02C	Total/NA	Solid	Total BTEX	
880-26511-5	BH03A	Total/NA	Solid	Total BTEX	
880-26511-6	BH03C	Total/NA	Solid	Total BTEX	
880-26511-7	BH04A	Total/NA	Solid	Total BTEX	
880-26511-8	BH04C	Total/NA	Solid	Total BTEX	
880-26511-9	BH05A	Total/NA	Solid	Total BTEX	
880-26511-10	BH05C	Total/NA	Solid	Total BTEX	
880-26511-11	BH06A	Total/NA	Solid	Total BTEX	
880-26511-12	BH06C	Total/NA	Solid	Total BTEX	
880-26511-13	BH07A	Total/NA	Solid	Total BTEX	
880-26511-14	BH07C	Total/NA	Solid	Total BTEX	

Prep Batch: 50426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-9	BH05A	Total/NA	Solid	5035	
880-26511-10	BH05C	Total/NA	Solid	5035	
880-26511-11	BH06A	Total/NA	Solid	5035	
880-26511-12	BH06C	Total/NA	Solid	5035	
880-26511-13	BH07A	Total/NA	Solid	5035	
880-26511-14	BH07C	Total/NA	Solid	5035	
MB 880-50426/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-50426/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-50426/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-26511-9 MS	BH05A	Total/NA	Solid	5035	
880-26511-9 MSD	BH05A	Total/NA	Solid	5035	

Analysis Batch: 50521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-9	BH05A	Total/NA	Solid	8021B	50426
880-26511-10	BH05C	Total/NA	Solid	8021B	50426
880-26511-11	BH06A	Total/NA	Solid	8021B	50426
880-26511-12	BH06C	Total/NA	Solid	8021B	50426
880-26511-13	BH07A	Total/NA	Solid	8021B	50426
880-26511-14	BH07C	Total/NA	Solid	8021B	50426
MB 880-50426/5-A	Method Blank	Total/NA	Solid	8021B	50426
LCS 880-50426/1-A	Lab Control Sample	Total/NA	Solid	8021B	50426
LCSD 880-50426/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	50426
880-26511-9 MS	BH05A	Total/NA	Solid	8021B	50426
880-26511-9 MSD	BH05A	Total/NA	Solid	8021B	50426

GC Semi VOA

Prep Batch: 50047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-1	BH01A	Total/NA	Solid	8015NM Prep	
880-26511-2	BH01C	Total/NA	Solid	8015NM Prep	
880-26511-3	BH02A	Total/NA	Solid	8015NM Prep	
880-26511-4	BH02C	Total/NA	Solid	8015NM Prep	
880-26511-5	BH03A	Total/NA	Solid	8015NM Prep	
880-26511-6	BH03C	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

GC Semi VOA (Continued)

Prep Batch: 50047 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-7	BH04A	Total/NA	Solid	8015NM Prep	
880-26511-8	BH04C	Total/NA	Solid	8015NM Prep	
880-26511-9	BH05A	Total/NA	Solid	8015NM Prep	
880-26511-10	BH05C	Total/NA	Solid	8015NM Prep	
880-26511-11	BH06A	Total/NA	Solid	8015NM Prep	
880-26511-12	BH06C	Total/NA	Solid	8015NM Prep	
880-26511-13	BH07A	Total/NA	Solid	8015NM Prep	
880-26511-14	BH07C	Total/NA	Solid	8015NM Prep	
MB 880-50047/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-50047/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-50047/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-26511-1 MS	BH01A	Total/NA	Solid	8015NM Prep	
880-26511-1 MSD	BH01A	Total/NA	Solid	8015NM Prep	

Analysis Batch: 50077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-1	BH01A	Total/NA	Solid	8015B NM	50047
880-26511-2	BH01C	Total/NA	Solid	8015B NM	50047
880-26511-3	BH02A	Total/NA	Solid	8015B NM	50047
880-26511-4	BH02C	Total/NA	Solid	8015B NM	50047
880-26511-5	BH03A	Total/NA	Solid	8015B NM	50047
880-26511-6	BH03C	Total/NA	Solid	8015B NM	50047
880-26511-7	BH04A	Total/NA	Solid	8015B NM	50047
880-26511-8	BH04C	Total/NA	Solid	8015B NM	50047
880-26511-9	BH05A	Total/NA	Solid	8015B NM	50047
880-26511-10	BH05C	Total/NA	Solid	8015B NM	50047
880-26511-11	BH06A	Total/NA	Solid	8015B NM	50047
880-26511-12	BH06C	Total/NA	Solid	8015B NM	50047
880-26511-13	BH07A	Total/NA	Solid	8015B NM	50047
880-26511-14	BH07C	Total/NA	Solid	8015B NM	50047
MB 880-50047/1-A	Method Blank	Total/NA	Solid	8015B NM	50047
LCS 880-50047/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	50047
LCSD 880-50047/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	50047
880-26511-1 MS	BH01A	Total/NA	Solid	8015B NM	50047
880-26511-1 MSD	BH01A	Total/NA	Solid	8015B NM	50047

Analysis Batch: 50210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-1	BH01A	Total/NA	Solid	8015 NM	
880-26511-2	BH01C	Total/NA	Solid	8015 NM	
880-26511-3	BH02A	Total/NA	Solid	8015 NM	
880-26511-4	BH02C	Total/NA	Solid	8015 NM	
880-26511-5	BH03A	Total/NA	Solid	8015 NM	
880-26511-6	BH03C	Total/NA	Solid	8015 NM	
880-26511-7	BH04A	Total/NA	Solid	8015 NM	
880-26511-8	BH04C	Total/NA	Solid	8015 NM	
880-26511-9	BH05A	Total/NA	Solid	8015 NM	
880-26511-10	BH05C	Total/NA	Solid	8015 NM	
880-26511-11	BH06A	Total/NA	Solid	8015 NM	
880-26511-12	BH06C	Total/NA	Solid	8015 NM	
880-26511-13	BH07A	Total/NA	Solid	8015 NM	

Eurofins Midland

QC Association Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

GC Semi VOA (Continued)

Analysis Batch: 50210 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-14	BH07C	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 50414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-1	BH01A	Soluble	Solid	DI Leach	
880-26511-2	BH01C	Soluble	Solid	DI Leach	
880-26511-3	BH02A	Soluble	Solid	DI Leach	
880-26511-4	BH02C	Soluble	Solid	DI Leach	
880-26511-5	BH03A	Soluble	Solid	DI Leach	
880-26511-6	BH03C	Soluble	Solid	DI Leach	
880-26511-7	BH04A	Soluble	Solid	DI Leach	
880-26511-8	BH04C	Soluble	Solid	DI Leach	
880-26511-9	BH05A	Soluble	Solid	DI Leach	
880-26511-10	BH05C	Soluble	Solid	DI Leach	
880-26511-11	BH06A	Soluble	Solid	DI Leach	
MB 880-50414/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-50414/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-50414/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-26511-2 MS	BH01C	Soluble	Solid	DI Leach	
880-26511-2 MSD	BH01C	Soluble	Solid	DI Leach	

Leach Batch: 50415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-12	BH06C	Soluble	Solid	DI Leach	
880-26511-13	BH07A	Soluble	Solid	DI Leach	
880-26511-14	BH07C	Soluble	Solid	DI Leach	
MB 880-50415/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-50415/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-50415/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-26511-12 MS	BH06C	Soluble	Solid	DI Leach	
880-26511-12 MSD	BH06C	Soluble	Solid	DI Leach	

Analysis Batch: 50611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-12	BH06C	Soluble	Solid	300.0	50415
880-26511-13	BH07A	Soluble	Solid	300.0	50415
880-26511-14	BH07C	Soluble	Solid	300.0	50415
MB 880-50415/1-A	Method Blank	Soluble	Solid	300.0	50415
LCS 880-50415/2-A	Lab Control Sample	Soluble	Solid	300.0	50415
LCSD 880-50415/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	50415
880-26511-12 MS	BH06C	Soluble	Solid	300.0	50415
880-26511-12 MSD	BH06C	Soluble	Solid	300.0	50415

Analysis Batch: 50612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-1	BH01A	Soluble	Solid	300.0	50414
880-26511-2	BH01C	Soluble	Solid	300.0	50414
880-26511-3	BH02A	Soluble	Solid	300.0	50414
880-26511-4	BH02C	Soluble	Solid	300.0	50414

Eurofins Midland

QC Association Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

HPLC/IC (Continued)

Analysis Batch: 50612 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-26511-5	BH03A	Soluble	Solid	300.0	50414
880-26511-6	BH03C	Soluble	Solid	300.0	50414
880-26511-7	BH04A	Soluble	Solid	300.0	50414
880-26511-8	BH04C	Soluble	Solid	300.0	50414
880-26511-9	BH05A	Soluble	Solid	300.0	50414
880-26511-10	BH05C	Soluble	Solid	300.0	50414
880-26511-11	BH06A	Soluble	Solid	300.0	50414
MB 880-50414/1-A	Method Blank	Soluble	Solid	300.0	50414
LCS 880-50414/2-A	Lab Control Sample	Soluble	Solid	300.0	50414
LCSD 880-50414/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	50414
880-26511-2 MS	BH01C	Soluble	Solid	300.0	50414
880-26511-2 MSD	BH01C	Soluble	Solid	300.0	50414

Lab Chronicle

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH01A
Date Collected: 03/22/23 09:40
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50190	MNR	EET MID	04/03/23 12:22
Total/NA	Analysis	8021B		1	50119	MNR	EET MID	04/04/23 03:28
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/04/23 10:41
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 11:38
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 01:17

Client Sample ID: BH01C
Date Collected: 03/22/23 10:30
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50190	MNR	EET MID	04/03/23 12:22
Total/NA	Analysis	8021B		1	50119	MNR	EET MID	04/04/23 03:48
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/04/23 10:41
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 12:44
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 01:22

Client Sample ID: BH02A
Date Collected: 03/22/23 11:00
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50190	MNR	EET MID	04/03/23 12:22
Total/NA	Analysis	8021B		1	50119	MNR	EET MID	04/04/23 04:08
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/04/23 10:41
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 13:06
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 01:37

Client Sample ID: BH02C
Date Collected: 03/22/23 11:20
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50190	MNR	EET MID	04/03/23 12:22
Total/NA	Analysis	8021B		1	50119	MNR	EET MID	04/04/23 04:29
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/04/23 10:41

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH02C
Date Collected: 03/22/23 11:20
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 13:27
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 01:42

Client Sample ID: BH03A
Date Collected: 03/22/23 12:30
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50190	MNR	EET MID	04/03/23 12:22
Total/NA	Analysis	8021B		1	50119	MNR	EET MID	04/04/23 04:49
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/04/23 10:41
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 13:49
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 01:56

Client Sample ID: BH03C
Date Collected: 03/22/23 12:50
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50190	MNR	EET MID	04/03/23 12:22
Total/NA	Analysis	8021B		1	50119	MNR	EET MID	04/04/23 05:10
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/04/23 10:41
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 14:11
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 02:01

Client Sample ID: BH04A
Date Collected: 03/23/23 13:00
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50190	MNR	EET MID	04/03/23 12:22
Total/NA	Analysis	8021B		1	50119	MNR	EET MID	04/04/23 05:30
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/04/23 10:41
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 14:32

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH04A
Date Collected: 03/23/23 13:00
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		5	50612	SMC	EET MID	04/07/23 02:06

Client Sample ID: BH04C
Date Collected: 03/23/23 13:20
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50191	MNR	EET MID	04/03/23 12:30
Total/NA	Analysis	8021B		1	50285	MNR	EET MID	04/04/23 11:09
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/04/23 15:09
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 14:54
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 02:11

Client Sample ID: BH05A
Date Collected: 03/27/23 09:20
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50426	MNR	EET MID	04/05/23 16:16
Total/NA	Analysis	8021B		1	50521	SM	EET MID	04/06/23 16:16
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/08/23 09:11
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 15:16
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 02:15

Client Sample ID: BH05C
Date Collected: 03/27/23 09:40
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50426	MNR	EET MID	04/05/23 16:16
Total/NA	Analysis	8021B		1	50521	SM	EET MID	04/06/23 16:43
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/08/23 09:11
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 15:38
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		1	50612	SMC	EET MID	04/07/23 02:20

Lab Chronicle

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH06A
Date Collected: 03/27/23 10:00
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50426	MNR	EET MID	04/05/23 16:16
Total/NA	Analysis	8021B		1	50521	SM	EET MID	04/06/23 17:09
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/08/23 09:11
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 16:21
Soluble	Leach	DI Leach			50414	KS	EET MID	04/05/23 14:44
Soluble	Analysis	300.0		5	50612	SMC	EET MID	04/07/23 17:00

Client Sample ID: BH06C
Date Collected: 03/27/23 10:20
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50426	MNR	EET MID	04/05/23 16:16
Total/NA	Analysis	8021B		1	50521	SM	EET MID	04/06/23 17:36
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/08/23 09:11
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 16:43
Soluble	Leach	DI Leach			50415	KS	EET MID	04/05/23 14:45
Soluble	Analysis	300.0		1	50611	SMC	EET MID	04/06/23 21:39

Client Sample ID: BH07A
Date Collected: 03/27/23 10:40
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50426	MNR	EET MID	04/05/23 16:16
Total/NA	Analysis	8021B		1	50521	SM	EET MID	04/06/23 18:02
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/08/23 09:11
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 17:48
Soluble	Leach	DI Leach			50415	KS	EET MID	04/05/23 14:45
Soluble	Analysis	300.0		1	50611	SMC	EET MID	04/06/23 21:54

Client Sample ID: BH07C
Date Collected: 03/27/23 11:00
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			50426	MNR	EET MID	04/05/23 16:16
Total/NA	Analysis	8021B		1	50521	SM	EET MID	04/06/23 18:29
Total/NA	Analysis	Total BTEX		1	50309	AJ	EET MID	04/08/23 09:11

Eurofins Midland

Lab Chronicle

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Client Sample ID: BH07C
Date Collected: 03/27/23 11:00
Date Received: 03/28/23 07:58

Lab Sample ID: 880-26511-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 NM		1	50210	SM	EET MID	04/03/23 14:32
Total/NA	Prep	8015NM Prep			50047	AJ	EET MID	03/31/23 14:31
Total/NA	Analysis	8015B NM		1	50077	SM	EET MID	04/01/23 18:10
Soluble	Leach	DI Leach			50415	KS	EET MID	04/05/23 14:45
Soluble	Analysis	300.0		1	50611	SMC	EET MID	04/06/23 21:59

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

- 1
- 2
- 3
- 4
- 5
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- 12
- 13
- 14

Accreditation/Certification Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-25	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

- ASTM = ASTM International
- EPA = US Environmental Protection Agency
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

- EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: MCA 254

Job ID: 880-26511-1
SDG: 03D2057064

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-26511-1	BH01A	Solid	03/22/23 09:40	03/28/23 07:58	1'
880-26511-2	BH01C	Solid	03/22/23 10:30	03/28/23 07:58	3'
880-26511-3	BH02A	Solid	03/22/23 11:00	03/28/23 07:58	1'
880-26511-4	BH02C	Solid	03/22/23 11:20	03/28/23 07:58	3'
880-26511-5	BH03A	Solid	03/22/23 12:30	03/28/23 07:58	1'
880-26511-6	BH03C	Solid	03/22/23 12:50	03/28/23 07:58	3'
880-26511-7	BH04A	Solid	03/23/23 13:00	03/28/23 07:58	1'
880-26511-8	BH04C	Solid	03/23/23 13:20	03/28/23 07:58	3'
880-26511-9	BH05A	Solid	03/27/23 09:20	03/28/23 07:58	1'
880-26511-10	BH05C	Solid	03/27/23 09:40	03/28/23 07:58	3'
880-26511-11	BH06A	Solid	03/27/23 10:00	03/28/23 07:58	1'
880-26511-12	BH06C	Solid	03/27/23 10:20	03/28/23 07:58	3'
880-26511-13	BH07A	Solid	03/27/23 10:40	03/28/23 07:58	1'
880-26511-14	BH07C	Solid	03/27/23 11:00	03/28/23 07:58	3'



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300
Midland TX (432) 704-5440 San Antonio TX (210) 509-3334
El Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
Hobbs NM (575) 392-7550 Carlsbad NM (575) 986-3199

Work Order No: 20511

www.xenco.com Page 1 of 2

Project Manager:	Kate Jennings	Bill to: (if different)	Kate Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marientfield St Suite 400	Address:	601 N Marientfield St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	817-683-2505	Email:	kennings@ensolum.com, jkennings@ensolum.com

Project Name:	MOA 254	Turn Around	Pres. Code	ANALYSIS REQUEST
Project Number:	05D9057064	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush		
Project Location:	32.580678-103.16872	Due Date		
Sampler's Name:	YIPANMA FALCONI/NOTES	TAT starts the day received by the lab if received by 4:30pm		
PO #:				
SAMPLE RECEIPT	Temp Blank: <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Thermometer ID: <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Wet Ice: <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Parameters
Samples Received Intact:	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Correction Factor		
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Temperature Reading		
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Corrected Temperature:		
Total Containers:				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	CHLORIDES (EPA 300.0)	TPH (8015)	BTEX (8021)	Preservative Codes	Sample Comments
BH01A	S	8/22/23	0940	1'	G	1				None NO	DI Water H ₂ O
BH01C		8/22/23	1030	8'						Cool Cool	MeOH Me
BH02A		8/22/23	1100	1'						HCL HC	HNO ₃ HN
BH02C		8/22/23	1120	3'						H ₂ SO ₄ H ₂	NaOH Na
BH03A		8/22/23	1230	1'						H ₃ PO ₄ HP	
BH03C		8/22/23	1750	3'						NaHSO ₄ NABIS	
BH04A		8/23/23	1800	1'						Na ₂ S ₂ O ₃ NaSO ₃	
BH04C		8/23/23	1820	3'						Zn Acetate+NaOH Zn	
BH05A		8/23/23	0920	1'						NaOH+Ascorbic Acid SAPC	
BH05C		8/23/23	0940	3'							



880-26511 Chain of Custody

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texs 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed	TCLP / SPLP 6010	8RCRA	SD As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Hg 1631 / 2451 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
		8/25/23 0758			



Environment Testing
Xenco

Houston TX (281) 240-4200 Dallas TX (214) 902-0300
Midland TX (432) 704-5440 San Antonio TX (210) 509-3334
El Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199

Chain of Custody

Work Order No: 20511

www.xenco.com Page 2 of 2

Project Manager	Kaler Jennings	Bill to (if different)	Kaler Jennings
Company Name	Ensolum, LLC	Company Name	Ensolum, LLC
Address	601 N Marrenfield St Suite 400	Address	601 N Marrenfield St Suite 400
City, State ZIP	Midland, TX 79701	City, State ZIP	Midland, TX 79701
Phone	817-688-2503	Email	kjennings@ensolum.com, faldomata@ensolum.com

Program: <input type="checkbox"/> UT/PT <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	Deliverables EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other

Project Name	MPA254	Turn Around	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Pres. Code		ANALYSIS REQUEST										Preservative Codes	
Project Number	030057004															None NO	
Project Location	3280678-13.7652	Due Date														Cool Cool	
Sampler's Name	William Faldomata	TAT starts the day received by the lab if received by 4:30pm														HCL HC	
P.O. #																H ₂ SO ₄ H ₂	
SAMPLE RECEIPT		Temp Blank	Yes No	Thermometer ID	Wet Ice	Yes No											H ₃ PO ₄ HP
Samples Received Intact	Yes No	Correction Factor	T.M.-007													NaHSO ₄ NABIS	
Cooler Custody Seals	Yes No	Temperature Reading	-0.2													Na ₂ S ₂ O ₃ NaSO ₃	
Sample Custody Seals	Yes No	Corrected Temperature	1.0													Zn Acetate+NaOH Zn	
Total Containers			0.8													NaOH+Ascorbic Acid SAPC	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA 300.0)	TPH (8015)	BTEX (8021)											Sample Comments
BH06A	S	3/27/23	10:00	1'	G	1	1	1	1											
BH06C	↓	3/27/23	10:20	3'	↓	1	1	1	1											
BH07A		3/27/23	10:40	7'		1	1	1	1											
BH07C	↓	3/27/23	11:00	3'	↓	1	1	1	1											
															Loc: 880					
															26511					

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U Hg 1631 / 2451 / 7470 / 7471

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Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 880-26511-1

SDG Number: 03D2057064

Login Number: 26511

List Source: Eurofins Midland

List Number: 1

Creator: Kramer, Jessica

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



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

September 11, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/07/23 10:10.

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: 09/07/2023
 Reported: 09/11/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/05/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS - 1 (4.0') (H234848-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/08/2023	ND	1.87	93.5	2.00	1.43	
Toluene*	<0.050	0.050	09/08/2023	ND	1.91	95.5	2.00	0.873	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	1.95	97.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	5.83	97.2	6.00	1.58	
Total BTEX	<0.300	0.300	09/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	480	16.0	09/07/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	180	90.0	200	0.807	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	184	91.8	200	1.48	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					

Surrogate: 1-Chlorooctane 79.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.3 % 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:	09/07/2023	Sampling Date:	09/05/2023
Reported:	09/11/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 2 (4.0') (H234848-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/08/2023	ND	1.87	93.5	2.00	1.43	
Toluene*	<0.050	0.050	09/08/2023	ND	1.91	95.5	2.00	0.873	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	1.95	97.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	5.83	97.2	6.00	1.58	
Total BTEX	<0.300	0.300	09/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	09/07/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	180	90.0	200	0.807	
DRO >C10-C28*	10.2	10.0	09/07/2023	ND	184	91.8	200	1.48	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					

Surrogate: 1-Chlorooctane 90.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.9 % 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: 09/07/2023
 Reported: 09/11/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/05/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS - 4 (4.0') (H234848-03)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/08/2023	ND	1.87	93.5	2.00	1.43	
Toluene*	<0.050	0.050	09/08/2023	ND	1.91	95.5	2.00	0.873	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	1.95	97.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	5.83	97.2	6.00	1.58	
Total BTEX	<0.300	0.300	09/08/2023	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	320	16.0	09/07/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	180	90.0	200	0.807	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	184	91.8	200	1.48	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					

Surrogate: 1-Chlorooctane 80.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.8 % 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:	09/07/2023	Sampling Date:	09/05/2023
Reported:	09/11/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 5 (4.0') (H234848-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/08/2023	ND	1.87	93.5	2.00	1.43	
Toluene*	<0.050	0.050	09/08/2023	ND	1.91	95.5	2.00	0.873	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	1.95	97.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	5.83	97.2	6.00	1.58	
Total BTEX	<0.300	0.300	09/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	5920	16.0	09/07/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	188	93.8	200	1.26	
DRO >C10-C28*	111	10.0	09/07/2023	ND	197	98.4	200	4.26	
EXT DRO >C28-C36	56.5	10.0	09/07/2023	ND					

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.7 % 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: 09/07/2023
 Reported: 09/11/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/05/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS - 6 (4.0') (H234848-05)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/08/2023	ND	1.87	93.5	2.00	1.43	
Toluene*	<0.050	0.050	09/08/2023	ND	1.91	95.5	2.00	0.873	
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	1.95	97.5	2.00	1.11	
Total Xylenes*	<0.150	0.150	09/08/2023	ND	5.83	97.2	6.00	1.58	
Total BTEX	<0.300	0.300	09/08/2023	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	4080	16.0	09/07/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	188	93.8	200	1.26	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	197	98.4	200	4.26	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					

Surrogate: 1-Chlorooctane 97.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 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:	09/07/2023	Sampling Date:	09/05/2023
Reported:	09/11/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 54 (H234848-06)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/08/2023	ND	1.87	93.5	2.00	1.43		
Toluene*	<0.050	0.050	09/08/2023	ND	1.91	95.5	2.00	0.873		
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	1.95	97.5	2.00	1.11		
Total Xylenes*	<0.150	0.150	09/08/2023	ND	5.83	97.2	6.00	1.58		
Total BTEX	<0.300	0.300	09/08/2023	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	96.0	16.0	09/07/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	188	93.8	200	1.26		
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	197	98.4	200	4.26		
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND						

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	09/07/2023	Sampling Date:	09/05/2023
Reported:	09/11/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 55 (H234848-07)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/08/2023	ND	1.87	93.5	2.00	1.43		
Toluene*	<0.050	0.050	09/08/2023	ND	1.91	95.5	2.00	0.873		
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	1.95	97.5	2.00	1.11		
Total Xylenes*	<0.150	0.150	09/08/2023	ND	5.83	97.2	6.00	1.58		
Total BTEX	<0.300	0.300	09/08/2023	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	112	16.0	09/07/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	176	88.1	200	0.226	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	193	96.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	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:

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

Received:	09/07/2023	Sampling Date:	09/05/2023
Reported:	09/11/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 57 (H234848-08)

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	09/08/2023	ND	1.94	97.1	2.00	0.825		
Toluene*	<0.050	0.050	09/08/2023	ND	1.93	96.6	2.00	0.0764		
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	2.06	103	2.00	0.345		
Total Xylenes*	<0.150	0.150	09/08/2023	ND	6.16	103	6.00	1.17		
Total BTEX	<0.300	0.300	09/08/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	160	16.0	09/07/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	176	88.1	200	0.226	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	193	96.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					

Surrogate: 1-Chlorooctane 106 % 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:

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

Received:	09/07/2023	Sampling Date:	09/05/2023
Reported:	09/11/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 58 (H234848-09)

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	09/08/2023	ND	1.94	97.1	2.00	0.825		
Toluene*	<0.050	0.050	09/08/2023	ND	1.93	96.6	2.00	0.0764		
Ethylbenzene*	<0.050	0.050	09/08/2023	ND	2.06	103	2.00	0.345		
Total Xylenes*	<0.150	0.150	09/08/2023	ND	6.16	103	6.00	1.17		
Total BTEx	<0.300	0.300	09/08/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	128	16.0	09/07/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/07/2023	ND	176	88.1	200	0.226	
DRO >C10-C28*	<10.0	10.0	09/07/2023	ND	193	96.4	200	3.53	
EXT DRO >C28-C36	<10.0	10.0	09/07/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



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September 13, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/08/23 13:44.

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 fluid and cursive, with the first name "Celey" being more prominent.

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:	09/08/2023	Sampling Date:	09/07/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 3 (4.0') (H234882-01)

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	09/11/2023	ND	1.86	93.1	2.00	3.13	
Toluene*	<0.050	0.050	09/11/2023	ND	2.32	116	2.00	0.548	
Ethylbenzene*	<0.050	0.050	09/11/2023	ND	2.40	120	2.00	0.637	
Total Xylenes*	<0.150	0.150	09/11/2023	ND	7.15	119	6.00	0.700	
Total BTEX	<0.300	0.300	09/11/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	09/12/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2023	ND	204	102	200	18.4	
DRO >C10-C28*	<10.0	10.0	09/11/2023	ND	200	100	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	09/11/2023	ND					

Surrogate: 1-Chlorooctane 90.7 % 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: 09/08/2023
 Reported: 09/13/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/07/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS - 11 (4.0') (H234882-02)

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	09/11/2023	ND	1.86	93.1	2.00	3.13		
Toluene*	<0.050	0.050	09/11/2023	ND	2.32	116	2.00	0.548		
Ethylbenzene*	<0.050	0.050	09/11/2023	ND	2.40	120	2.00	0.637		
Total Xylenes*	<0.150	0.150	09/11/2023	ND	7.15	119	6.00	0.700		
Total BTEx	<0.300	0.300	09/11/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	09/12/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2023	ND	204	102	200	18.4	
DRO >C10-C28*	<10.0	10.0	09/11/2023	ND	200	100	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	09/11/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 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:	09/08/2023	Sampling Date:	09/07/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 12 (4.0') (H234882-03)

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	09/11/2023	ND	1.86	93.1	2.00	3.13		
Toluene*	<0.050	0.050	09/11/2023	ND	2.32	116	2.00	0.548		
Ethylbenzene*	<0.050	0.050	09/11/2023	ND	2.40	120	2.00	0.637		
Total Xylenes*	<0.150	0.150	09/11/2023	ND	7.15	119	6.00	0.700		
Total BTEX	<0.300	0.300	09/11/2023	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	480	16.0	09/12/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2023	ND	204	102	200	18.4	
DRO >C10-C28*	31.7	10.0	09/11/2023	ND	200	100	200	19.7	
EXT DRO >C28-C36	16.5	10.0	09/11/2023	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 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: 09/08/2023
 Reported: 09/13/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/07/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS - 13 (4.0') (H234882-04)

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	09/11/2023	ND	1.86	93.1	2.00	3.13	
Toluene*	<0.050	0.050	09/11/2023	ND	2.32	116	2.00	0.548	
Ethylbenzene*	<0.050	0.050	09/11/2023	ND	2.40	120	2.00	0.637	
Total Xylenes*	<0.150	0.150	09/11/2023	ND	7.15	119	6.00	0.700	
Total BTEX	<0.300	0.300	09/11/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	09/12/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2023	ND	204	102	200	18.4	
DRO >C10-C28*	<10.0	10.0	09/11/2023	ND	200	100	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	09/11/2023	ND					

Surrogate: 1-Chlorooctane 104 % 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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Analytical Results For:

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

Received: 09/08/2023
 Reported: 09/13/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/07/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS - 14 (4.0') (H234882-05)

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	09/11/2023	ND	1.86	93.1	2.00	3.13		
Toluene*	<0.050	0.050	09/11/2023	ND	2.32	116	2.00	0.548		
Ethylbenzene*	<0.050	0.050	09/11/2023	ND	2.40	120	2.00	0.637		
Total Xylenes*	<0.150	0.150	09/11/2023	ND	7.15	119	6.00	0.700		
Total BTEx	<0.300	0.300	09/11/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	864	16.0	09/12/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2023	ND	204	102	200	18.4	
DRO >C10-C28*	<10.0	10.0	09/11/2023	ND	200	100	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	09/11/2023	ND					

Surrogate: 1-Chlorooctane 94.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	09/08/2023	Sampling Date:	09/07/2023
Reported:	09/13/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 15 (4.0') (H234882-06)

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	09/11/2023	ND	1.86	93.1	2.00	3.13		
Toluene*	<0.050	0.050	09/11/2023	ND	2.32	116	2.00	0.548		
Ethylbenzene*	<0.050	0.050	09/11/2023	ND	2.40	120	2.00	0.637		
Total Xylenes*	<0.150	0.150	09/11/2023	ND	7.15	119	6.00	0.700		
Total BTEX	<0.300	0.300	09/11/2023	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	1360	16.0	09/12/2023	ND	432	108	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*	<10.0	10.0	09/12/2023	ND	204	102	200	18.4	
DRO >C10-C28*	<10.0	10.0	09/12/2023	ND	200	100	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	09/12/2023	ND					

Surrogate: 1-Chlorooctane 135 % 48.2-134

Surrogate: 1-Chlorooctadecane 178 % 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: 09/08/2023
 Reported: 09/13/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/07/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS - 16 (4.0') (H234882-07)

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	09/11/2023	ND	1.86	93.1	2.00	3.13	
Toluene*	<0.050	0.050	09/11/2023	ND	2.32	116	2.00	0.548	
Ethylbenzene*	<0.050	0.050	09/11/2023	ND	2.40	120	2.00	0.637	
Total Xylenes*	<0.150	0.150	09/11/2023	ND	7.15	119	6.00	0.700	
Total BTEX	<0.300	0.300	09/11/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	09/12/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2023	ND	204	102	200	18.4	
DRO >C10-C28*	<10.0	10.0	09/11/2023	ND	200	100	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	09/11/2023	ND					

Surrogate: 1-Chlorooctane 90.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 09/08/2023
 Reported: 09/13/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/07/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 1 (H234882-08)

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	09/11/2023	ND	1.86	93.1	2.00	3.13	
Toluene*	<0.050	0.050	09/11/2023	ND	2.32	116	2.00	0.548	
Ethylbenzene*	<0.050	0.050	09/11/2023	ND	2.40	120	2.00	0.637	
Total Xylenes*	<0.150	0.150	09/11/2023	ND	7.15	119	6.00	0.700	
Total BTEX	<0.300	0.300	09/11/2023	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	240	16.0	09/12/2023	ND	432	108	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*	<10.0	10.0	09/11/2023	ND	204	102	200	18.4	
DRO >C10-C28*	15.8	10.0	09/11/2023	ND	200	100	200	19.7	
EXT DRO >C28-C36	11.8	10.0	09/11/2023	ND					

Surrogate: 1-Chlorooctane 129 % 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: 09/08/2023
 Reported: 09/13/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/07/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 2 (H234882-09)

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	09/11/2023	ND	1.86	93.1	2.00	3.13		
Toluene*	<0.050	0.050	09/11/2023	ND	2.32	116	2.00	0.548		
Ethylbenzene*	<0.050	0.050	09/11/2023	ND	2.40	120	2.00	0.637		
Total Xylenes*	<0.150	0.150	09/11/2023	ND	7.15	119	6.00	0.700		
Total BTEx	<0.300	0.300	09/11/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	256	16.0	09/12/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/11/2023	ND	204	102	200	18.4	
DRO >C10-C28*	<10.0	10.0	09/11/2023	ND	200	100	200	19.7	
EXT DRO >C28-C36	<10.0	10.0	09/11/2023	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Notes and Definitions

S-05	The surrogate recovery is outside of lab established statistical control limits but still within method limits. Data is not adversely affected.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-04	The RPD for the BS/BSD was outside of historical limits.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4558
Fax (432) 682-3946

Page 1 of 1

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

MCA-254

281-755-8965

Project Location:

(county, state) Lea County, NM

Project #:

chuck.terhune@tetratech.com

Invoice to:

Attn: Chuck Terhune

212C-MD-03216

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

Lat lon

LAB #		SAMPLE IDENTIFICATION											
DATE		SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS		FILTERED (Y/N)	
YEAR: 2023													
WATER		SOIL		HCL		HNO ₃							

1	FS-3 (4.0')	9/7/2023		X			X				X		X						
2	FS-11 (4.0')	9/7/2023		X			X				X		X						
3	FS-12 (4.0')	9/7/2023		X			X				X		X						
4	FS-13 (4.0')	9/7/2023		X			X				X		X						
5	FS-14 (4.0')	9/7/2023		X			X				X		X						
6	FS-15 (4.0')	9/7/2023		X			X				X		X						
7	FS-16 (4.0')	9/7/2023		X			X				X		X						
8	SW-1	9/7/2023		X			X				X		X						
9	SW-2	9/7/2023		X			X				X		X						

Relinquished by: [Signature] Date: 9/7/2023 Time: 1343

Relinquished by: [Signature] Date: 9/7/2023 Time: 1343

Relinquished by: [Signature] Date: 9/7/2023 Time: 1343

Received by: [Signature] Date: 9/7/2023 Time: 1344

Received by: [Signature] Date: 9/7/2023 Time: 1344

LAB USE ONLY
Sample Temperature: 2.8°C
REMARKS: Standard TAT
☐ RUSH: Same Day 24 hr 48 hr 72 hr
☐ Rush Charges Authorized
☐ Special Report Limits or TRRP Report

LAB USE ONLY
#140

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:



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

September 15, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/13/23 10:48.

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 "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For 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: 09/13/2023
 Reported: 09/15/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/12/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS - 8 (4.0') (H234937-01)

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	09/14/2023	ND	1.93	96.5	2.00	1.30	
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55	
Total BTEX	<0.300	0.300	09/14/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	3600	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	201	101	200	1.63	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	202	101	200	0.318	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 99.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

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Mike Snyder For 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:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 9 (4.0') (H234937-02)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTEX	<0.300	0.300	09/14/2023	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	3360	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	201	101	200	1.63	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	202	101	200	0.318	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 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: 09/13/2023
 Reported: 09/15/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/12/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS - 10 (4.0') (H234937-03)

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	09/14/2023	ND	1.93	96.5	2.00	1.30	
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53	
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13	
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55	
Total BTX	<0.300	0.300	09/14/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	1620	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	201	101	200	1.63	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	202	101	200	0.318	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 98.7 % 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:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 17 (4.0') (H234937-04)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTX	<0.300	0.300	09/14/2023	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	2240	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	201	101	200	1.63	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	202	101	200	0.318	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 97.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 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: 09/13/2023
 Reported: 09/15/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/12/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS - 18 (4.0') (H234937-05)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTEx	<0.300	0.300	09/14/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	3360	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	201	101	200	1.63	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	202	101	200	0.318	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 120 % 48.2-134

Surrogate: 1-Chlorooctadecane 136 % 49.1-148

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Mike Snyder For 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:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 20 (4.0') (H234937-06)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTEX	<0.300	0.300	09/14/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	3920	16.0	09/14/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	201	101	200	1.63	
DRO >C10-C28*	78.9	10.0	09/14/2023	ND	202	101	200	0.318	
EXT DRO >C28-C36	65.2	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 120 % 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:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 21 (4.0') (H234937-07)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTEX	<0.300	0.300	09/14/2023	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	3440	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	201	101	200	1.63	
DRO >C10-C28*	159	10.0	09/14/2023	ND	202	101	200	0.318	
EXT DRO >C28-C36	93.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 96.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 119 % 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: 09/13/2023
 Reported: 09/15/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/12/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS - 7 (4.0') (H234937-08)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTEX	<0.300	0.300	09/14/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	1580	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	195	97.3	200	2.70	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	208	104	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 85.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.0 % 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:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 53 (H234937-09)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTEX	<0.300	0.300	09/14/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	195	97.3	200	2.70	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	208	104	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 93.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.5 % 49.1-148

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Mike Snyder For 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:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 48 (H234937-10)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTX	<0.300	0.300	09/14/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	195	97.3	200	2.70	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	208	104	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 85.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.2 % 49.1-148

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Mike Snyder For 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: 09/13/2023
 Reported: 09/15/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/12/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 3 (H234937-11)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTEX	<0.300	0.300	09/14/2023	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	288	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	195	97.3	200	2.70	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	208	104	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 87.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.0 % 49.1-148

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Mike Snyder For 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:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 52 (H234937-12)

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	09/14/2023	ND	1.93	96.5	2.00	1.30		
Toluene*	<0.050	0.050	09/14/2023	ND	1.90	94.8	2.00	1.53		
Ethylbenzene*	<0.050	0.050	09/14/2023	ND	2.02	101	2.00	1.13		
Total Xylenes*	<0.150	0.150	09/14/2023	ND	6.00	100	6.00	1.55		
Total BTEX	<0.300	0.300	09/14/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	195	97.3	200	2.70		
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	208	104	200	4.95		
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND						

Surrogate: 1-Chlorooctane 99.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Mike Snyder For 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:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 50 (H234937-13)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.6	2.00	2.77		
Toluene*	<0.050	0.050	09/15/2023	ND	1.89	94.7	2.00	2.71		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.3	2.00	1.97		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.49	91.5	6.00	3.20		
Total BTEX	<0.300	0.300	09/15/2023	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	112	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	195	97.3	200	2.70	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	208	104	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 91.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.9 % 49.1-148

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Mike Snyder For 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:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 49 (H234937-14)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.6	2.00	2.77		
Toluene*	<0.050	0.050	09/15/2023	ND	1.89	94.7	2.00	2.71		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.3	2.00	1.97		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.49	91.5	6.00	3.20		
Total BTEX	<0.300	0.300	09/15/2023	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	544	16.0	09/14/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	195	97.3	200	2.70	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	208	104	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 95.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Mike Snyder For 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: 09/13/2023
 Reported: 09/15/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/12/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 51 (H234937-15)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.6	2.00	2.77	
Toluene*	<0.050	0.050	09/15/2023	ND	1.89	94.7	2.00	2.71	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.3	2.00	1.97	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.49	91.5	6.00	3.20	
Total BTEX	<0.300	0.300	09/15/2023	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	432	16.0	09/14/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	195	97.3	200	2.70	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	208	104	200	4.95	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 99.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Mike Snyder For 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 "Mike Snyder".

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 882-4559
Fax (432) 882-3946

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

MCA-254

281-755-8965

Project Location:

Lea County, NM

Project #:

chuck.terhune@tetratech.com

Invoice to:

Attn: Chuck Terhune

212C-MD-03216

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

Lat lon

SAMPLE IDENTIFICATION

LAB #
(LAB USE ONLY)

SAMPLING
YEAR: 2023
DATE
TIME

MATRIX
PRESERVATIVE METHOD

WATER
SOIL
HCL
HNO₃
ICE

CONTAINERS
FILTERED (Y/N)

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

Hold

ANALYSIS REQUEST
(Circle or Specify Method No.)

Inquired by:

Date: 9/12/23
Time: 1800

Received by:

Date: 9/12/23
Time: 1805

Inquired by:

Date: 9/12/23
Time: 1048

Received by:

Date: 9/12/23
Time: 10:40

Inquired by:

Date: 9/12/23
Time: 10:40

Received by:

Date: 9/12/23
Time: 10:40

REMARKS:

Standard TAT

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

LAB USE ONLY

Sample Temperature

-20°C

#140

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



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

September 15, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/14/23 15:47.

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 "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For 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: 09/14/2023
 Reported: 09/15/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 56 (H234979-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	2.03	101	2.00	0.112	
Toluene*	<0.050	0.050	09/15/2023	ND	2.06	103	2.00	0.0707	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.02	101	2.00	0.563	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	6.14	102	6.00	1.85	
Total BTX	<0.300	0.300	09/15/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	09/15/2023	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	09/14/2023	ND	210	105	200	1.31	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	216	108	200	0.737	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 90.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Mike Snyder For 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:	09/14/2023	Sampling Date:	09/14/2023
Reported:	09/15/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 59 (H234979-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	2.03	101	2.00	0.112	
Toluene*	<0.050	0.050	09/15/2023	ND	2.06	103	2.00	0.0707	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.02	101	2.00	0.563	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	6.14	102	6.00	1.85	
Total BTEX	<0.300	0.300	09/15/2023	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	09/15/2023	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	09/14/2023	ND	210	105	200	1.31	
DRO >C10-C28*	<10.0	10.0	09/14/2023	ND	216	108	200	0.737	
EXT DRO >C28-C36	<10.0	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 95.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Mike Snyder For 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 "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

September 18, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/15/23 8:37.

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:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 27 (4.0') (H234998-01)

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	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	2000	16.0	09/15/2023	ND	448	112	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	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	QM-07
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 96.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 23 (4.0') (H234998-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	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	3320	16.0	09/15/2023	ND	448	112	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	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	41.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	20.2	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 99.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 09/15/2023
 Reported: 09/18/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS - 25 (4.0') (H234998-03)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25		
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03		
Total BTEX	<0.300	0.300	09/15/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	09/15/2023	ND	448	112	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	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 95.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 24 (4.0') (H234998-04)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25		
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03		
Total BTEX	<0.300	0.300	09/15/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1440	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	14.5	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 105 % 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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Analytical Results For:

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

Received:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 29 (4.0') (H234998-05)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25		
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03		
Total BTEX	<0.300	0.300	09/15/2023	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 97.8 % 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:

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

Received:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 38 (2.0') (H234998-06)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25		
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03		
Total BTEX	<0.300	0.300	09/15/2023	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	336	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 99.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 37 (2.0') (H234998-07)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	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	224	16.0	09/15/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 96.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 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: 09/15/2023
 Reported: 09/18/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 6 (H234998-08)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	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	128	16.0	09/15/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 98.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 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: 09/15/2023
 Reported: 09/18/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 47 (H234998-09)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	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	352	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	79.3	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	31.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 94.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 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:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 41 (H234998-10)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25		
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03		
Total BTEX	<0.300	0.300	09/15/2023	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	304	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 103 % 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: 09/15/2023
 Reported: 09/18/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 9 (H234998-11)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	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	32.0	16.0	09/15/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 98.4 % 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:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 11 (H234998-12)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25		
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03		
Total BTEX	<0.300	0.300	09/15/2023	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	416	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	57.3	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	19.5	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 97.3 % 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:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 7 (H234998-13)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/15/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 91.7 % 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: 09/15/2023
 Reported: 09/18/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 46 (H234998-14)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	09/15/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 94.7 % 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: 09/15/2023
 Reported: 09/18/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 8 (H234998-15)

BTEx 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	09/15/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 97.5 % 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:

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

Received:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 45 (H234998-16)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25		
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03		
Total BTEX	<0.300	0.300	09/15/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 92.4 % 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:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 4 (H234998-17)

BTEx 8021B			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25		
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03		
Total BTEX	<0.300	0.300	09/15/2023	ND						

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

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13		
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15		
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND						

Surrogate: 1-Chlorooctane 90.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.6 % 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:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 44 (H234998-18)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25		
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03		
Total BTEX	<0.300	0.300	09/15/2023	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	224	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 91.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 09/15/2023
 Reported: 09/18/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 12 (H234998-19)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/15/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 94.6 % 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:

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

Received: 09/15/2023
 Reported: 09/18/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 10 (H234998-20)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.99	99.5	2.00	1.25	
Toluene*	<0.050	0.050	09/15/2023	ND	2.01	101	2.00	1.04	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.6	2.00	1.05	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	5.93	98.9	6.00	1.03	
Total BTEX	<0.300	0.300	09/15/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	09/15/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	190	94.8	200	1.13	
DRO >C10-C28*	<10.0	10.0	09/15/2023	ND	196	97.8	200	2.15	
EXT DRO >C28-C36	<10.0	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 98.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 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:	09/15/2023	Sampling Date:	09/14/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 33 (H234998-21)

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	09/15/2023	ND	1.83	91.4	2.00	0.547		
Toluene*	<0.050	0.050	09/15/2023	ND	2.08	104	2.00	1.73		
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.22	111	2.00	1.79		
Total Xylenes*	<0.150	0.150	09/15/2023	ND	6.62	110	6.00	0.324	QR-03	
Total BTX	<0.300	0.300	09/15/2023	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	464	16.0	09/15/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	200	100	200	2.63	
DRO >C10-C28*	158	10.0	09/15/2023	ND	196	98.1	200	0.463	
EXT DRO >C28-C36	87.6	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 132 % 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: 09/15/2023
 Reported: 09/18/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/14/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: SW - 5 (H234998-22)

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	09/15/2023	ND	1.83	91.4	2.00	0.547	
Toluene*	<0.050	0.050	09/15/2023	ND	2.08	104	2.00	1.73	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	2.22	111	2.00	1.79	
Total Xylenes*	<0.150	0.150	09/15/2023	ND	6.62	110	6.00	0.324	
Total BTX	<0.300	0.300	09/15/2023	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	560	16.0	09/15/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/15/2023	ND	200	100	200	2.63	
DRO >C10-C28*	35.8	10.0	09/15/2023	ND	196	98.1	200	0.463	
EXT DRO >C28-C36	32.8	10.0	09/15/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 127 % 49.1-148

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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.
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

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

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

Project Name: **MCA-254** 281-755-8965

Project Location: **Lea County, NM** Project #: chuck.terhune@tetratech.com

Invoice to:

Attn: Chuck Terhune

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

Comments:

LAB # **4334998**
(LAB USE ONLY)

SAMPLE IDENTIFICATION

		SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)
		DATE	TIME	WATER	SOIL	HCL	HNO ₃		
1	FS-27 (4.0')	9/14/2023		X			X		
2	FS-23 (4.0')	9/14/2023		X			X		
3	FS-25 (4.0')	9/14/2023		X			X		
4	FS-24 (4.0')	9/14/2023		X			X		
5	FS-29 (4.0')	9/14/2023		X			X		
6	FS-38 (2.0')	9/14/2023		X			X		
7	FS-37 (2.0')	9/14/2023		X			X		

ANALYSIS REQUEST

(Circle or Specify Method No.)

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

Relinquished by: **Jorge Fernandez Vela** Date: Time:

Relinquished by: **Chuck Terhune** Date: 9/15/23 Time: 0700

Relinquished by: **Chuck Terhune** Date: 9/15/23 Time: 0835

Received by: **Chuck Terhune** Date: 9/15/23 Time: 0700

Received by: **Chuck Terhune** Date: 9/15/23 Time: 0837

Received by: **Chuck Terhune** Date: 9/15/23 Time: 0837

REMARKS: Standard TAT

LAB USE ONLY

Sample Temperature 3.4°C

- ☒ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

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Analysis Request of Custody Record



Tetra Tech, Inc.

901 W. Wall Street, Ste 100
Midland, Texas 79701 •
Tel (432) 682-4539
Fax (432) 682-3946

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

MCA-254

281-755-8965

Project Location:
(county, state)

Lea County, NM

Project #:

chuck.terhune@tetratech.com

212C-MD-03216

Invoice to:

Attn: Chuck Terhune

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

Lat Lon

SAMPLE IDENTIFICATION

LAB #
(LAB USE ONLY)

SAMPLING
YEAR: 2023
DATE
TIME

MATRIX
WATER
SOIL
HCL
HNO₃
ICE
PRESERVATIVE METHOD

CONTAINERS
FILTERED (Y/N)

BTEX 8021B BTEX 8260B

TPH TX1005 (Ext to C35)

TPH 8015M (GRO - DRO - ORO - MRO)

PAH 8270C

Total Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8260B / 624

GC/MS Semi. Vol. 8270C/625

PCB's 8082 / 608

NORM

PLM (Asbestos)

Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

Hold

ANALYSIS REQUEST

(Circle or Specify Method No.)

Relinquished by: *Jorge Fernandez Vela* Date: Time:

Relinquished by: *Jorge Fernandez Vela* Date: Time:

Relinquished by: *Jorge Fernandez Vela* Date: Time:

Received by: *Jorge Fernandez Vela* Date: Time:

Received by: *Jorge Fernandez Vela* Date: Time:

Received by: *Jorge Fernandez Vela* Date: Time:

LAB USE ONLY

REMARKS: Standard TAT

Sample Temperature

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

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Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

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

Project Name: **MCA-254** 281-755-8965

Project Location: **Lea County, NM** Project #: **chuck.terhune@tetratech.com**

Invoice to: **Attn: Chuck Terhune** 212C-MD-03216

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

Comments: **Lat Ion**

LAB # (LAB USE ONLY)	H234998	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)	
			DATE	TIME	WATER	SOIL	HCL	HNO3			CE
BTEX 8021B BTEX											
COPH TX1005 (Ext to											
COPH 8015M (GRO -											
CPAH 8270C											
COPH Metals Ag As B											
COPH Volatiles											
COPH Semi Volatiles											
COPH RCI											
COPH/MS Vol. 8260B /											
COPH/MS Semi. Vol. 82											
COPH's 8082 / 608 .											
COPHORM											
COPHLM (Asbestos)											
Chloride											
Chloride Sulfate											
General Water Chem											
Anion/Cation Balance											
Hold											

13	SW-7	9/14/2023		X			X			X	
14	SW-46	9/14/2023		X			X			X	
15	SW-8	9/14/2023		X			X			X	
16	SW-45	9/14/2023		X			X			X	
17	SW-4	9/14/2023		X			X			X	
18	SW-44	9/14/2023		X			X			X	
19	SW-12	9/14/2023		X			X			X	
20	SW-10	9/14/2023		X			X			X	
21	SW-33	9/14/2023		X			X			X	
22	SW-5	9/14/2023		X			X			X	

Relinquished by: Jorge Fernandez Vela	Date: 9/15/23	Time: 0700
Relinquished by: Chuck Terhune	Date: 9/15/23	Time: 0700
Relinquished by: Chuck Terhune	Date: 9/15/23	Time: 8:37

ANALYSIS REQUEST
(Circle or Specify Method No.)

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

LAB USE ONLY

REMARKS: Standard TAT

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

#1410

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

September 19, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/18/23 8:52.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 34 (2.0') (H235020-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89	
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49	
Total BTX	<0.300	0.300	09/18/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 108 % 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:

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

Received:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 35 (2.0') (H235020-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEx	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	608	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 103 % 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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Analytical Results For:

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

Received:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 36 (2.0') (H235020-03)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89	
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49	
Total BTEX	<0.300	0.300	09/18/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	656	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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: 09/18/2023
 Reported: 09/19/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/15/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS - 39 (2.0') (H235020-04)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEx	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	384	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 09/18/2023
 Reported: 09/19/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/15/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FS - 43 (2.0') (H235020-05)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89	
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49	
Total BTEX	<0.300	0.300	09/18/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 133 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 40 (2.0') (H235020-06)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEX	<0.300	0.300	09/18/2023	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	352	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 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:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 41 (2.0') (H235020-07)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEx	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 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:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 42 (2.0') (H235020-08)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEX	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 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:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 44 (2.0') (H235020-09)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEX	<0.300	0.300	09/18/2023	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	80.0	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 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:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 33 (2.0') (H235020-10)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEX	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	640	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 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: 09/18/2023
 Reported: 09/19/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/15/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 32 (H235020-11)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89	
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49	
Total BTEX	<0.300	0.300	09/18/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 85.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.6 % 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:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 34 (H235020-12)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEX	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 94.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 09/18/2023
 Reported: 09/19/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/15/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SW - 35 (H235020-13)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89	
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49	
Total BTEX	<0.300	0.300	09/18/2023	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	304	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 39 (H235020-14)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEX	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 122 % 48.2-134

Surrogate: 1-Chlorooctadecane 137 % 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:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 40 (H235020-15)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEX	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 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:

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

Received:	09/18/2023	Sampling Date:	09/15/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 42 (H235020-16)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEX	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	208	16.0	09/18/2023	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	09/18/2023	ND	199	99.4	200	2.47	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	202	101	200	1.75	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 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

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

MCA-254

Project #:

chuck.terhune@tetratech.com

Project Location:

Lea County, NM

Project #:

212C-MD-03216

Invoice to:

Attn: Chuck Terhune

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

LAB #
LAB USE ONLY

SAMPLE IDENTIFICATION

YEAR 2023	SAMPLING		MATRIX				PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)
	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE			

1	FS-34 (2.0')	9/15/2023		X				X		
2	FS-35 (2.0')	9/15/2023		X				X		
3	FS-36 (2.0')	9/15/2023		X				X		
4	FS-39(2.0')	9/15/2023		X				X		
5	FS-39(2.0') 43	9/15/2023		X				X		
6	FS-40(2.0')	9/15/2023		X				X		
7	FS-41 (2.0')	9/15/2023		X				X		
8	FS-42 (2.0')	9/15/2023		X				X		
9	FS-44 (2.0')	9/15/2023		X				X		
10	FS-33 (2.0')	9/15/2023		X				X		

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

LAB USE ONLY

Sample Temperature

2.8°C

- REMARKS: Standard TAT
- ☒ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

ANALYSIS REQUEST
(Circle or Specify Method No.)

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

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

MCA-254

281-755-8965

Project Location:
(county, state)

Lea County, NM

Project #:

chuck.terhune@tetratech.com

212C-MD-03216

Invoice to:

Attn: Chuck Terhune

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

LAB #
(LAB USE ONLY)

SAMPLE IDENTIFICATION

LAB #

DATE

TIME

WATER

SOIL

HCL

HNO₃

ICE

CONTAINERS

FILTERED (Y/N)

BTEX 8021B BTEX 8260B

TPH TX1005 (Ext to C35)

TPH 8015M (GRO - DRO - ORO - MRO)

PAH 8270C

Total Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8260B / 624

GC/MS Semi. Vol. 8270C/625

PCB's 8082 / 608

NORM

PLM (Asbestos)

Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

Hold

ANALYSIS REQUEST (Circle or Specify Method No.)

Relinquished by:

Date: Time: 8:51

Received by:

Date: Time: 9-18-23

Relinquished by:

Date: Time: 9-18-23

Received by:

Date: Time: 9-18-23

Relinquished by:

Date: Time: 9-18-23

Received by:

Date: Time: 9-18-23

LAB USE ONLY

REMARKS:

Standard TAT

Sample Temperature

2.8°C

24 hr 48 hr 72 hr

☒ RUSH: Same Day
☐ Rush Charges Authorized
☐ Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

#140



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

September 20, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/18/23 8:52.

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 fluid and cursive, with the first name "Celey" and last name "Keene" clearly distinguishable.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 09/18/2023
Reported: 09/20/2023
Project Name: MCA - 254
Project Number: 212C - HN - 03216
Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/15/2023
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: FS - 5 (8.0') (H235021-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2920	16.0	09/18/2023	ND	432	108	400	0.00		

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Custody Record



Tetra Tech, Inc.

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

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

MCA-254

281-755-8965

Project Location:

Lea County, NM

Project #:

chuck.terhune@tetratech.com

Invoice to:

212C-MD-03216

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

Hold sample results from FS-5 (6.0')

SAMPLE IDENTIFICATION

LAB USE ONLY

SAMPLING

YEAR: 2023

DATE TIME

MATRIX PRESERVATIVE METHOD

WATER SOIL HCL HNO₃ ICE

CONTAINERS FILTERED (Y/N)

ANALYSIS REQUEST

(Circle or Specify Method No.)

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

Hold

Inquired by:

Date: Time: 8:51

Inquired by:

Date: Time: 9-18-23

Inquired by:

Date: Time:

Received by:

Date: Time: 9-18-23

Received by:

Date: Time: 9-18-23

Received by:

Date: Time:

LAB USE ONLY

Sample Temperature

78.6

#140

REMARKS:

Standard TAT

☐ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:



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

September 19, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/18/23 15:00.

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".

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: 09/18/2023
 Reported: 09/19/2023
 Project Name: MCA - 254
 Project Number: 212C - HN - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/18/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS - 18 (4:0') (H235039-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89	
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49	
Total BTEX	<0.300	0.300	09/18/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	2840	16.0	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 73.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.6 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 19 (4:0') (H235039-02)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/18/2023	ND	1.98	98.8	2.00	1.89		
Toluene*	<0.050	0.050	09/18/2023	ND	2.03	101	2.00	1.25		
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	1.97	98.5	2.00	2.29		
Total Xylenes*	<0.150	0.150	09/18/2023	ND	5.93	98.8	6.00	2.49		
Total BTEX	<0.300	0.300	09/18/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	2520	16.0	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 86.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.1 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 22 (4:0') (H235039-03)

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	09/18/2023	ND	1.93	96.6	2.00	1.18	QR-03
Toluene*	<0.050	0.050	09/18/2023	ND	1.94	96.9	2.00	7.43	
Ethylbenzene*	<0.050	0.050	09/18/2023	ND	2.09	104	2.00	1.72	
Total Xylenes*	<0.150	0.150	09/18/2023	ND	6.25	104	6.00	1.86	
Total BTEX	<0.300	0.300	09/18/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	768	16.0	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 94.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.2 % 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:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 28 (4:0') (H235039-04)

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	09/19/2023	ND	1.93	96.6	2.00	1.18		
Toluene*	<0.050	0.050	09/19/2023	ND	1.94	96.9	2.00	7.43		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	2.09	104	2.00	1.72		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.25	104	6.00	1.86		
Total BTEX	<0.300	0.300	09/19/2023	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	1070	16.0	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	22.2	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	15.9	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.7 % 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:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 43 (2:0') (H235039-05)

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	09/19/2023	ND	1.93	96.6	2.00	1.18		
Toluene*	<0.050	0.050	09/19/2023	ND	1.94	96.9	2.00	7.43		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	2.09	104	2.00	1.72		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.25	104	6.00	1.86		
Total BTEx	<0.300	0.300	09/19/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 95.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.2 % 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:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 45 (2:0') (H235039-06)

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	09/19/2023	ND	1.93	96.6	2.00	1.18		
Toluene*	<0.050	0.050	09/19/2023	ND	1.94	96.9	2.00	7.43		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	2.09	104	2.00	1.72		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.25	104	6.00	1.86		
Total BTEx	<0.300	0.300	09/19/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	368	16.0	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 97.3 % 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:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 46 (3:0') (H235039-07)

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	09/19/2023	ND	1.93	96.6	2.00	1.18		
Toluene*	<0.050	0.050	09/19/2023	ND	1.94	96.9	2.00	7.43		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	2.09	104	2.00	1.72		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.25	104	6.00	1.86		
Total BTEX	<0.300	0.300	09/19/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 93.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.5 % 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:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 47 (3:0') (H235039-08)

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	09/19/2023	ND	1.93	96.6	2.00	1.18		
Toluene*	<0.050	0.050	09/19/2023	ND	1.94	96.9	2.00	7.43		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	2.09	104	2.00	1.72		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.25	104	6.00	1.86		
Total BTEX	<0.300	0.300	09/19/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	09/19/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 97.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.7 % 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:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 36 (H235039-09)

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	09/19/2023	ND	1.93	96.6	2.00	1.18		
Toluene*	<0.050	0.050	09/19/2023	ND	1.94	96.9	2.00	7.43		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	2.09	104	2.00	1.72		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.25	104	6.00	1.86		
Total BTEX	<0.300	0.300	09/19/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 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	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 95.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.5 % 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:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 37 (H235039-10)

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	09/19/2023	ND	1.93	96.6	2.00	1.18		
Toluene*	<0.050	0.050	09/19/2023	ND	1.94	96.9	2.00	7.43		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	2.09	104	2.00	1.72		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.25	104	6.00	1.86		
Total BTEX	<0.300	0.300	09/19/2023	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	32.0	16.0	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 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:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 38 (H235039-11)

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	09/19/2023	ND	1.93	96.6	2.00	1.18		
Toluene*	<0.050	0.050	09/19/2023	ND	1.94	96.9	2.00	7.43		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	2.09	104	2.00	1.72		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.25	104	6.00	1.86		
Total BTEX	<0.300	0.300	09/19/2023	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	256	16.0	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.3 % 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:	09/18/2023	Sampling Date:	09/18/2023
Reported:	09/19/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 39 (H235039-12)

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	09/19/2023	ND	1.93	96.6	2.00	1.18		
Toluene*	<0.050	0.050	09/19/2023	ND	1.94	96.9	2.00	7.43		
Ethylbenzene*	<0.050	0.050	09/19/2023	ND	2.09	104	2.00	1.72		
Total Xylenes*	<0.150	0.150	09/19/2023	ND	6.25	104	6.00	1.86		
Total BTEx	<0.300	0.300	09/19/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	208	16.0	09/19/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/18/2023	ND	192	95.9	200	24.0	
DRO >C10-C28*	<10.0	10.0	09/18/2023	ND	203	101	200	12.0	
EXT DRO >C28-C36	<10.0	10.0	09/18/2023	ND					

Surrogate: 1-Chlorooctane 94.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.6 % 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.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

MCA-254

Project #:

281-755-8965

Project Location:

Lea County, NM

Project #:

chuck.terhune@tetratech.com

212C-MD-03216

Invoice to:

Attn: Chuck Terhune

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

HA35039

LAB #

(LAB USE ONLY)

SAMPLE IDENTIFICATION

DATE

TIME

WATER

SOIL

HCL

HNO₃

ICE

CONTAINERS

FILTERED (Y/N)

BTEX 8021B BTEX 8260B

TPH TX1005 (Ext to C35)

TPH 8015M (GRO - DRO - ORO - MRO)

PAH 8270C

Total Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Metals Ag As Ba Cd Cr Pb Se Hg

TCLP Volatiles

TCLP Semi Volatiles

RCI

GC/MS Vol. 8260B / 624

GC/MS Semi. Vol. 8270C/625

PCB's 8082 / 608

NORM

PLM (Asbestos)

Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

Hold

ANALYSIS REQUEST

(Circle or Specify Method No.)

Relinquished by:

Date:

Time:

Received by:

Date:

Time:

Received by:

Date:

Time:

Received by:

Date:

Time:

Received by:

Date:

Time:

Received by:

Date:

Time:

LAB USE ONLY

REMARKS:

Standard TAT

☒ RUSH

Same Day

24 hr

48 hr

72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

ORIGINAL COPY



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

September 21, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/20/23 15:27.

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:	09/20/2023	Sampling Date:	09/20/2023
Reported:	09/21/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 33 (H235111-01)

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	09/20/2023	ND	1.97	98.7	2.00	1.32	
Toluene*	<0.050	0.050	09/20/2023	ND	2.02	101	2.00	0.00859	
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	2.14	107	2.00	0.553	
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.43	107	6.00	0.377	
Total BTX	<0.300	0.300	09/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 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	208	16.0	09/21/2023	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	09/21/2023	ND	221	111	200	4.15	
DRO >C10-C28*	<10.0	10.0	09/21/2023	ND	226	113	200	0.870	
EXT DRO >C28-C36	<10.0	10.0	09/21/2023	ND					

Surrogate: 1-Chlorooctane 76.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.6 % 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:	09/20/2023	Sampling Date:	09/20/2023
Reported:	09/21/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 47 (H235111-02)

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	09/20/2023	ND	1.97	98.7	2.00	1.32		
Toluene*	<0.050	0.050	09/20/2023	ND	2.02	101	2.00	0.00859		
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	2.14	107	2.00	0.553		
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.43	107	6.00	0.377		
Total BTEX	<0.300	0.300	09/20/2023	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	112	16.0	09/21/2023	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	09/21/2023	ND	221	111	200	4.15	
DRO >C10-C28*	<10.0	10.0	09/21/2023	ND	226	113	200	0.870	
EXT DRO >C28-C36	<10.0	10.0	09/21/2023	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.4 % 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:	09/20/2023	Sampling Date:	09/20/2023
Reported:	09/21/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 8 (H235111-03)

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	09/20/2023	ND	1.97	98.7	2.00	1.32		
Toluene*	<0.050	0.050	09/20/2023	ND	2.02	101	2.00	0.00859		
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	2.14	107	2.00	0.553		
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.43	107	6.00	0.377		
Total BTEX	<0.300	0.300	09/20/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	09/21/2023	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	09/21/2023	ND	221	111	200	4.15	
DRO >C10-C28*	27.2	10.0	09/21/2023	ND	226	113	200	0.870	
EXT DRO >C28-C36	28.7	10.0	09/21/2023	ND					

Surrogate: 1-Chlorooctane 89.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	09/20/2023	Sampling Date:	09/20/2023
Reported:	09/21/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 32 (H235111-04)

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	09/20/2023	ND	1.97	98.7	2.00	1.32	
Toluene*	<0.050	0.050	09/20/2023	ND	2.02	101	2.00	0.00859	
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	2.14	107	2.00	0.553	
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.43	107	6.00	0.377	
Total BTEX	<0.300	0.300	09/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 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	304	16.0	09/21/2023	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	09/21/2023	ND	214	107	200	6.27	
DRO >C10-C28*	<10.0	10.0	09/21/2023	ND	219	109	200	4.79	
EXT DRO >C28-C36	<10.0	10.0	09/21/2023	ND					

Surrogate: 1-Chlorooctane 70.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.7 % 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:	09/20/2023	Sampling Date:	09/20/2023
Reported:	09/21/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 33 (3.0') (H235111-05)

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	09/20/2023	ND	1.97	98.7	2.00	1.32	
Toluene*	<0.050	0.050	09/20/2023	ND	2.02	101	2.00	0.00859	
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	2.14	107	2.00	0.553	
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.43	107	6.00	0.377	
Total BTX	<0.300	0.300	09/20/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	09/21/2023	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	09/21/2023	ND	214	107	200	6.27	
DRO >C10-C28*	<10.0	10.0	09/21/2023	ND	219	109	200	4.79	
EXT DRO >C28-C36	<10.0	10.0	09/21/2023	ND					

Surrogate: 1-Chlorooctane 67.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.5 % 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:	09/20/2023	Sampling Date:	09/20/2023
Reported:	09/21/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 35 (3.0') (H235111-06)

BTX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/20/2023	ND	1.97	98.7	2.00	1.32	
Toluene*	<0.050	0.050	09/20/2023	ND	2.02	101	2.00	0.00859	
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	2.14	107	2.00	0.553	
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.43	107	6.00	0.377	
Total BTX	<0.300	0.300	09/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	09/21/2023	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/21/2023	ND	214	107	200	6.27	
DRO >C10-C28*	<10.0	10.0	09/21/2023	ND	219	109	200	4.79	
EXT DRO >C28-C36	<10.0	10.0	09/21/2023	ND					

Surrogate: 1-Chlorooctane 83.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.2 % 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:	09/20/2023	Sampling Date:	09/20/2023
Reported:	09/21/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 36 (3.0') (H235111-07)

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	09/20/2023	ND	1.97	98.7	2.00	1.32	
Toluene*	<0.050	0.050	09/20/2023	ND	2.02	101	2.00	0.00859	
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	2.14	107	2.00	0.553	
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.43	107	6.00	0.377	
Total BTX	<0.300	0.300	09/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	09/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/21/2023	ND	214	107	200	6.27	
DRO >C10-C28*	<10.0	10.0	09/21/2023	ND	219	109	200	4.79	
EXT DRO >C28-C36	<10.0	10.0	09/21/2023	ND					

Surrogate: 1-Chlorooctane 80.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.4 % 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:	09/20/2023	Sampling Date:	09/20/2023
Reported:	09/21/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - HN - 03216	Sample Received By:	Shari Cisneros
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 41 (3.0') (H235111-08)

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	09/20/2023	ND	1.97	98.7	2.00	1.32	
Toluene*	<0.050	0.050	09/20/2023	ND	2.02	101	2.00	0.00859	
Ethylbenzene*	<0.050	0.050	09/20/2023	ND	2.14	107	2.00	0.553	
Total Xylenes*	<0.150	0.150	09/20/2023	ND	6.43	107	6.00	0.377	
Total BTX	<0.300	0.300	09/20/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	09/21/2023	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/21/2023	ND	214	107	200	6.27	
DRO >C10-C28*	<10.0	10.0	09/21/2023	ND	219	109	200	4.79	
EXT DRO >C28-C36	<10.0	10.0	09/21/2023	ND					

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

501 W Wall Street, Ste 11
Midland, Texas 79701
Tel (432) 662-4559
Fax (432) 662-3946

Page 1 of 1

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

MCA-254

281-755-8965

Project Location:

Lea County, NM

Project #:

212C-MD-03216

Invoice to:

Attn: Chuck Terhune

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

H23511
LAB #
(LAB USE ONLY)

SAMPLE IDENTIFICATION

		SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)
		DATE	TIME	WATER	SOIL	HCL	HNO ₃		
1	SW-33	9/20/2023		X			X		
2	SW-47	9/20/2023		X			X		
3	SW-8	9/20/2023		X			X		
4	SW-32	9/20/2023		X			X		
5	FS-33 (3.0')	9/20/2023		X			X		
6	FS-35 (3.0')	9/20/2023		X			X		
7	FS-36 (3.0')	9/20/2023		X			X		
8	FS-41 (3.0')	9/20/2023		X			X		

ANALYSIS REQUEST

(Circle or Specify Method No.)

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

REMARKS: Standard TAT

LAB USE ONLY

Sample Temperature

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by: *Chuck Terhune* 9/20/23 15:26

Received by: *Shaw Cornejo* 9/20/23 15:27

#146

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



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September 26, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 09/25/23 15:06.

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".

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:	09/25/2023	Sampling Date:	09/25/2023
Reported:	09/26/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 13 (H235203-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2023	ND	2.07	103	2.00	0.733	
Toluene*	<0.050	0.050	09/25/2023	ND	2.18	109	2.00	0.221	
Ethylbenzene*	<0.050	0.050	09/25/2023	ND	2.42	121	2.00	1.90	
Total Xylenes*	<0.150	0.150	09/25/2023	ND	6.21	104	6.00	2.22	
Total BTX	<0.300	0.300	09/25/2023	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	272	16.0	09/26/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/26/2023	ND	192	95.9	200	3.38	
DRO >C10-C28*	<10.0	10.0	09/26/2023	ND	201	101	200	5.68	
EXT DRO >C28-C36	<10.0	10.0	09/26/2023	ND					

Surrogate: 1-Chlorooctane 87.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.7 % 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:	09/25/2023	Sampling Date:	09/25/2023
Reported:	09/26/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: SW - 43 (H235203-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2023	ND	2.07	103	2.00	0.733	
Toluene*	<0.050	0.050	09/25/2023	ND	2.18	109	2.00	0.221	
Ethylbenzene*	<0.050	0.050	09/25/2023	ND	2.42	121	2.00	1.90	
Total Xylenes*	<0.150	0.150	09/25/2023	ND	6.21	104	6.00	2.22	
Total BTEX	<0.300	0.300	09/25/2023	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	240	16.0	09/26/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/26/2023	ND	192	95.9	200	3.38	
DRO >C10-C28*	33.1	10.0	09/26/2023	ND	201	101	200	5.68	
EXT DRO >C28-C36	<10.0	10.0	09/26/2023	ND					

Surrogate: 1-Chlorooctane 87.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.7 % 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:	09/25/2023	Sampling Date:	09/25/2023
Reported:	09/26/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 30 (2.0') (H235203-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2023	ND	2.07	103	2.00	0.733	
Toluene*	<0.050	0.050	09/25/2023	ND	2.18	109	2.00	0.221	
Ethylbenzene*	<0.050	0.050	09/25/2023	ND	2.42	121	2.00	1.90	
Total Xylenes*	<0.150	0.150	09/25/2023	ND	6.21	104	6.00	2.22	
Total BTEX	<0.300	0.300	09/25/2023	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	176	16.0	09/26/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/26/2023	ND	192	95.9	200	3.38	
DRO >C10-C28*	<10.0	10.0	09/26/2023	ND	201	101	200	5.68	
EXT DRO >C28-C36	<10.0	10.0	09/26/2023	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 103 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	09/25/2023	Sampling Date:	09/25/2023
Reported:	09/26/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03216	Sample Received By:	Dionica Hinojos
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 31 (2.0') (H235203-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2023	ND	2.07	103	2.00	0.733	
Toluene*	<0.050	0.050	09/25/2023	ND	2.18	109	2.00	0.221	
Ethylbenzene*	<0.050	0.050	09/25/2023	ND	2.42	121	2.00	1.90	
Total Xylenes*	<0.150	0.150	09/25/2023	ND	6.21	104	6.00	2.22	
Total BTEX	<0.300	0.300	09/25/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 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	304	16.0	09/26/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/26/2023	ND	192	95.9	200	3.38	
DRO >C10-C28*	<10.0	10.0	09/26/2023	ND	201	101	200	5.68	
EXT DRO >C28-C36	<10.0	10.0	09/26/2023	ND					

Surrogate: 1-Chlorooctane 87.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.3 % 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: 09/25/2023
 Reported: 09/26/2023
 Project Name: MCA - 254
 Project Number: 212C - MD - 03216
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 09/25/2023
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Dionica Hinojos

Sample ID: FS - 32 (2.0') (H235203-05)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/25/2023	ND	2.07	103	2.00	0.733	
Toluene*	<0.050	0.050	09/25/2023	ND	2.18	109	2.00	0.221	
Ethylbenzene*	<0.050	0.050	09/25/2023	ND	2.42	121	2.00	1.90	
Total Xylenes*	<0.150	0.150	09/25/2023	ND	6.21	104	6.00	2.22	
Total BTEx	<0.300	0.300	09/25/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	09/26/2023	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/26/2023	ND	192	95.9	200	3.38	
DRO >C10-C28*	<10.0	10.0	09/26/2023	ND	201	101	200	5.68	
EXT DRO >C28-C36	<10.0	10.0	09/26/2023	ND					

Surrogate: 1-Chlorooctane 119 % 48.2-134

Surrogate: 1-Chlorooctadecane 122 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager




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

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Custody Record



Tetra Tech, Inc.

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

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

MCA-254

281-755-8965

Project Location:

(county, state) Lea County, NM

Project #:

chuck.terhune@tetratech.com

Invoice to:

212C-MD-03216

Attn: Chuck Terhune

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

H235803

SAMPLE IDENTIFICATION

LAB #
(LAB USE ONLY)

YEAR: 2023	SAMPLING		MATRIX				PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)
	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE			

1	SW-13									
2	SW-43	9/25/2023		X			X			
3	FS-30 (2.0')	9/25/2023		X			X			
4	FS-31 (2.0')	9/25/2023		X			X			
5	FS-32 (2.0')	9/25/2023		X			X			

ANALYSIS REQUEST
(Circle or Specify Method No.)

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

Hold

Relinquished by:

Date: 7-25-23 Time: 15:05

Relinquished by:

Date: 7-25-23 Time: 15:05

Relinquished by:

Date: 7-25-23 Time: 15:05

LAB USE ONLY

Sample Temperature

3.9C

REMARKS: Standard TAT

- ☒ RUSH: Same Day 24 hr 48 hr 72 hr
☐ Rush Charges Authorized
☐ Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:



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

November 02, 2023

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 10/26/23 13:12.

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, appearing to read "Mike Snyder", is written over a light gray rectangular background.

Mike Snyder For 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:	10/26/2023	Sampling Date:	10/26/2023
Reported:	11/02/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 5 (10-11') (H235876-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3520	16.0	10/27/2023	ND	384	96.0	400	11.8		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	10/26/2023	ND	181	90.6	200	1.51		
DRO >C10-C28*	<10.0	10.0	10/26/2023	ND	147	73.3	200	14.3		
EXT DRO >C28-C36	<10.0	10.0	10/26/2023	ND						
Surrogate: 1-Chlorooctane	82.9 %	48.2-134								
Surrogate: 1-Chlorooctadecane	74.8 %	49.1-148								

Sample ID: FS - 5 (14-15') (H235876-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2040	16.0	10/30/2023	ND	432	108	400	0.00		

Sample ID: FS - 5 (19-20') (H235876-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2560	16.0	10/31/2023	ND	416	104	400	3.77		

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For 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:	10/26/2023	Sampling Date:	10/26/2023
Reported:	11/02/2023	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03216	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA CO NM		

Sample ID: FS - 5 (24-25') (H235876-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3360	16.0	11/02/2023	ND	416	104	400	0.00		

Sample ID: FS - 5 (29-30') (H235876-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2880	16.0	11/02/2023	ND	416	104	400	0.00		

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Mike Snyder For 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 "Mike Snyder".

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

July 02, 2024

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 06/25/24 13:27.

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:

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

Received:	06/25/2024	Sampling Date:	06/24/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS-1 (4-5') (H243800-01)

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	06/30/2024	ND	1.98	99.2	2.00	7.68	
Toluene*	<0.050	0.050	06/30/2024	ND	2.09	104	2.00	8.48	
Ethylbenzene*	<0.050	0.050	06/30/2024	ND	2.07	103	2.00	8.99	
Total Xylenes*	<0.150	0.150	06/30/2024	ND	6.43	107	6.00	7.68	
Total BTEX	<0.300	0.300	06/30/2024	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	64.0	16.0	07/01/2024	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	06/30/2024	ND	177	88.5	200	1.38	
DRO >C10-C28*	<10.0	10.0	06/30/2024	ND	183	91.4	200	2.71	
EXT DRO >C28-C36	<10.0	10.0	06/30/2024	ND					

Surrogate: 1-Chlorooctane 120 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	06/25/2024	Sampling Date:	06/24/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS-2 (4-5') (H243800-02)

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/30/2024	ND	1.98	99.2	2.00	7.68		
Toluene*	<0.050	0.050	06/30/2024	ND	2.09	104	2.00	8.48		
Ethylbenzene*	<0.050	0.050	06/30/2024	ND	2.07	103	2.00	8.99		
Total Xylenes*	<0.150	0.150	06/30/2024	ND	6.43	107	6.00	7.68		
Total BTEx	<0.300	0.300	06/30/2024	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	672	16.0	07/01/2024	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	06/30/2024	ND	177	88.5	200	1.38	
DRO >C10-C28*	<10.0	10.0	06/30/2024	ND	183	91.4	200	2.71	
EXT DRO >C28-C36	<10.0	10.0	06/30/2024	ND					

Surrogate: 1-Chlorooctane 99.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	06/25/2024	Sampling Date:	06/24/2024
Reported:	07/02/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Shalyn Rodriguez
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS-3 (4-5') (H243800-03)

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	06/30/2024	ND	1.98	99.2	2.00	7.68		
Toluene*	<0.050	0.050	06/30/2024	ND	2.09	104	2.00	8.48		
Ethylbenzene*	<0.050	0.050	06/30/2024	ND	2.07	103	2.00	8.99		
Total Xylenes*	<0.150	0.150	06/30/2024	ND	6.43	107	6.00	7.68		
Total BTEX	<0.300	0.300	06/30/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	3040	16.0	07/01/2024	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	06/30/2024	ND	177	88.5	200	1.38	
DRO >C10-C28*	<10.0	10.0	06/30/2024	ND	183	91.4	200	2.71	
EXT DRO >C28-C36	<10.0	10.0	06/30/2024	ND					

Surrogate: 1-Chlorooctane 82.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.7 % 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

Cardinal Laboratories

*=Accredited Analyte

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

Caley D. Keene, Lab Director/Quality Manager



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

July 05, 2024

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 06/28/24 14:11.

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:

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

Received: 06/28/2024
 Reported: 07/05/2024
 Project Name: MCA - 254
 Project Number: 212C - MD - 03448
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 06/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: RS - 4 (4-5') (H243883-01)

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/04/2024	ND	1.98	99.1	2.00	2.99	
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59	
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55	
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18	
Total BTEx	<0.300	0.300	07/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 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	384	16.0	07/03/2024	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	07/02/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/02/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/02/2024	ND					

Surrogate: 1-Chlorooctane 102 % 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:

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

Received:	06/28/2024	Sampling Date:	06/26/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 5 (4-5') (H243883-02)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 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	272	16.0	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 103 % 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: 06/28/2024
 Reported: 07/05/2024
 Project Name: MCA - 254
 Project Number: 212C - MD - 03448
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 06/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: RS - 6 (4-5') (H243883-03)

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	07/04/2024	ND	1.98	99.1	2.00	2.99	
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59	
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55	
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18	
Total BTEX	<0.300	0.300	07/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 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:	06/28/2024	Sampling Date:	06/26/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 7 (4-4.5') (H243883-04)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 99.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 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:	06/28/2024	Sampling Date:	06/26/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 8 (4-5') (H243883-05)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 123 % 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: 06/28/2024
 Reported: 07/05/2024
 Project Name: MCA - 254
 Project Number: 212C - MD - 03448
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 06/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: RS - 9 (4-4.5') (H243883-06)

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	07/04/2024	ND	1.98	99.1	2.00	2.99	
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59	
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55	
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18	
Total BTEX	<0.300	0.300	07/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 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	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 06/28/2024
 Reported: 07/05/2024
 Project Name: MCA - 254
 Project Number: 212C - MD - 03448
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 06/26/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: RS - 10 (4-4.5') (H243883-07)

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	07/04/2024	ND	1.98	99.1	2.00	2.99	
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59	
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55	
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18	
Total BTEX	<0.300	0.300	07/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 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	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 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:	06/28/2024	Sampling Date:	06/26/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 11 (4-5') (H243883-08)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 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	1360	16.0	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 82.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	06/28/2024	Sampling Date:	06/26/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 12 (4-5') (H243883-09)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 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	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 95.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

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

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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



Client Name: Maverick Natural Resources Site Manager: Chuck Terhune

Project Name: MCA 254 Project #: 281-755-8965

Project Location: Lea County, NM Project #: chuck.terhune@tetratech.com

Invoice to: Attn: Chuck Terhune

Receiving Laboratory: Cardinal Labs Sampler Signature: Jorge Fernandez

Comments: Include : Chris Straub Chris.Straub@tetratech.com Jorge.Fernandez@tetratech.com

Include : Chris Straub Chris.Straub@tetratech.com Jorge.Fernandez@tetratech.com																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
H243883 LAB #	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX	TPH TX1005 (Ext to C)	TPH 8015M (GRO - D	PAH 8270C	Total Metals Ag As Ba	TCLP Metals Ag As Ba	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 6	GC/MS Semi. Vol. 827	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate	General Water Chem	Anion/Cation Balance																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Relinquished by: [Signature] Date: 6-26-24 Time: 1416

Relinquished by: [Signature] Date: 6-28-24 Time: 1411

Received by: [Signature] Date: [] Time: []

Received by: [Signature] Date: [] Time: []

LAB USE ONLY

REMARKS: Standard TAT

Sample Temperature: 3.0°C

☐ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

ORIGINAL COPY



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

July 05, 2024

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MCA - 254

Enclosed are the results of analyses for samples received by the laboratory on 06/28/24 14:11.

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:

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

Received:	06/28/2024	Sampling Date:	06/27/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 13 (4-5') (H243884-01)

BTEX 8021B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/04/2024	ND	1.98	99.1	2.00	2.99	
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59	
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55	
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18	
Total BTEX	<0.300	0.300	07/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 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	720	16.0	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 93.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 109 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	06/28/2024	Sampling Date:	06/27/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 14 (4-5') (H243884-02)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 100 % 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:

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

Received:	06/28/2024	Sampling Date:	06/27/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 15 (2-2.5') (H243884-03)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 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	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 102 % 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:

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

Received:	06/28/2024	Sampling Date:	06/27/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 16 (2-2.5') (H243884-04)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 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	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 99.7 % 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:	06/28/2024	Sampling Date:	06/27/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 17 (3-3.5') (H243884-05)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 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	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 99.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 118 % 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:	06/28/2024	Sampling Date:	06/27/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 18 (2-2.5') (H243884-06)

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	07/04/2024	ND	1.98	99.1	2.00	2.99		
Toluene*	<0.050	0.050	07/04/2024	ND	1.95	97.7	2.00	2.59		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	1.96	98.2	2.00	2.55		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	5.78	96.3	6.00	2.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 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	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 99.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 06/28/2024
 Reported: 07/05/2024
 Project Name: MCA - 254
 Project Number: 212C - MD - 03448
 Project Location: MAVERICK - LEA CO NM

Sampling Date: 06/27/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: RS - 19 (2-2.5') (H243884-07)

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	07/04/2024	ND	1.98	99.1	2.00	5.75	
Toluene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	5.95	
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	6.68	
Total Xylenes*	<0.150	0.150	07/04/2024	ND	6.60	110	6.00	6.18	
Total BTEX	<0.300	0.300	07/04/2024	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	256	16.0	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 99.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	06/28/2024	Sampling Date:	06/27/2024
Reported:	07/05/2024	Sampling Type:	Soil
Project Name:	MCA - 254	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03448	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA CO NM		

Sample ID: RS - 20 (2-2.5') (H243884-08)

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	07/04/2024	ND	1.98	99.1	2.00	5.75		
Toluene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	5.95		
Ethylbenzene*	<0.050	0.050	07/04/2024	ND	2.14	107	2.00	6.68		
Total Xylenes*	<0.150	0.150	07/04/2024	ND	6.60	110	6.00	6.18		
Total BTEX	<0.300	0.300	07/04/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	07/03/2024	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	07/03/2024	ND	190	94.9	200	0.125	
DRO >C10-C28*	<10.0	10.0	07/03/2024	ND	176	88.2	200	2.70	
EXT DRO >C28-C36	<10.0	10.0	07/03/2024	ND					

Surrogate: 1-Chlorooctane 102 % 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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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

Analysis Request of Chain of Custody Record



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

Client Name: **Maverick Natural Resources** Site Manager: **Chuck Terhune**
Project Name: **MCA 254** 281-755-8965
Project Location: **Lea County, NM** Project #: **chuck.terhune@tetratech.com**
212C-MD-03448

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

Comments:

Include : Chris Straub Chris.Straub@tetratech.com Jorge.Fernandez@tetratech.com

SAMPLE IDENTIFICATION

H-212584 LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		DATE	TIME	MATRIX		PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	ANALYSIS REQUEST (Circle or Specify Method No.)																Hold																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		WATER	SOIL			HCL	HNO ₃				ICE	BTEX 8021B (Ext t	TPH TX1005 (Ext t	TPH 8015M (GRO	PAH 8270C	Total Metals Ag As	TCLP Metals Ag As	TCLP Volatiles	TCLP Semi Volatile	RCI	GC/MS Vol. 8260B	GC/MS Semi. Vol.	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride		Chloride Sulfate	General Water Ch	Anion/Cation Bala																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
1	RS-13 (4-5')			6/27/2024		X			X		X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

Relinquished by: *[Signature]* Date: *6-28-24* Time: *1416*
Received by: *[Signature]* Date: *6-28-24* Time: *1411*
Relinquished by: *[Signature]* Date: *6-28-24* Time: *1416*
Received by: *[Signature]* Date: *6-28-24* Time: *1411*

LAB USE ONLY
Sample Temperature: *3.0°C*
REMARKS: *Standard TAT*
☐ RUSH: Same Day 24 hr 48 hr 72 hr
☐ Rush Charges Authorized
☐ Special Report Limits or TRRP Report

ORIGINAL COPY

Revised Assessment, Remediation, and Closure Report
Maverick Permian, LLC
MCA 254 Flowline Release
Incident ID: nAPP2302035947

July 12, 2024

ATTACHMENT 4 – PHOTOGRAPHIC DOCUMENTATION

Photographic Log

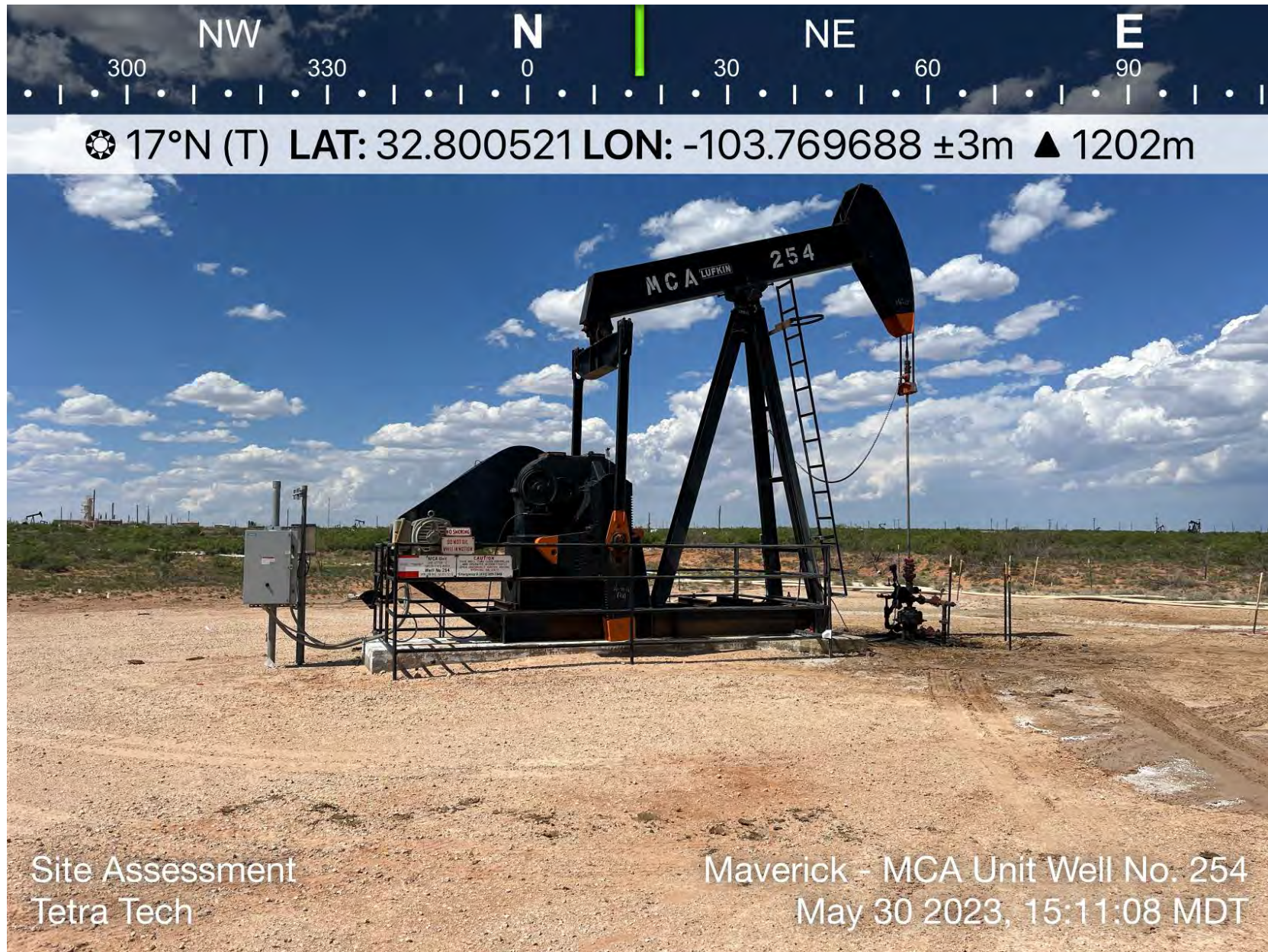



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
1 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log

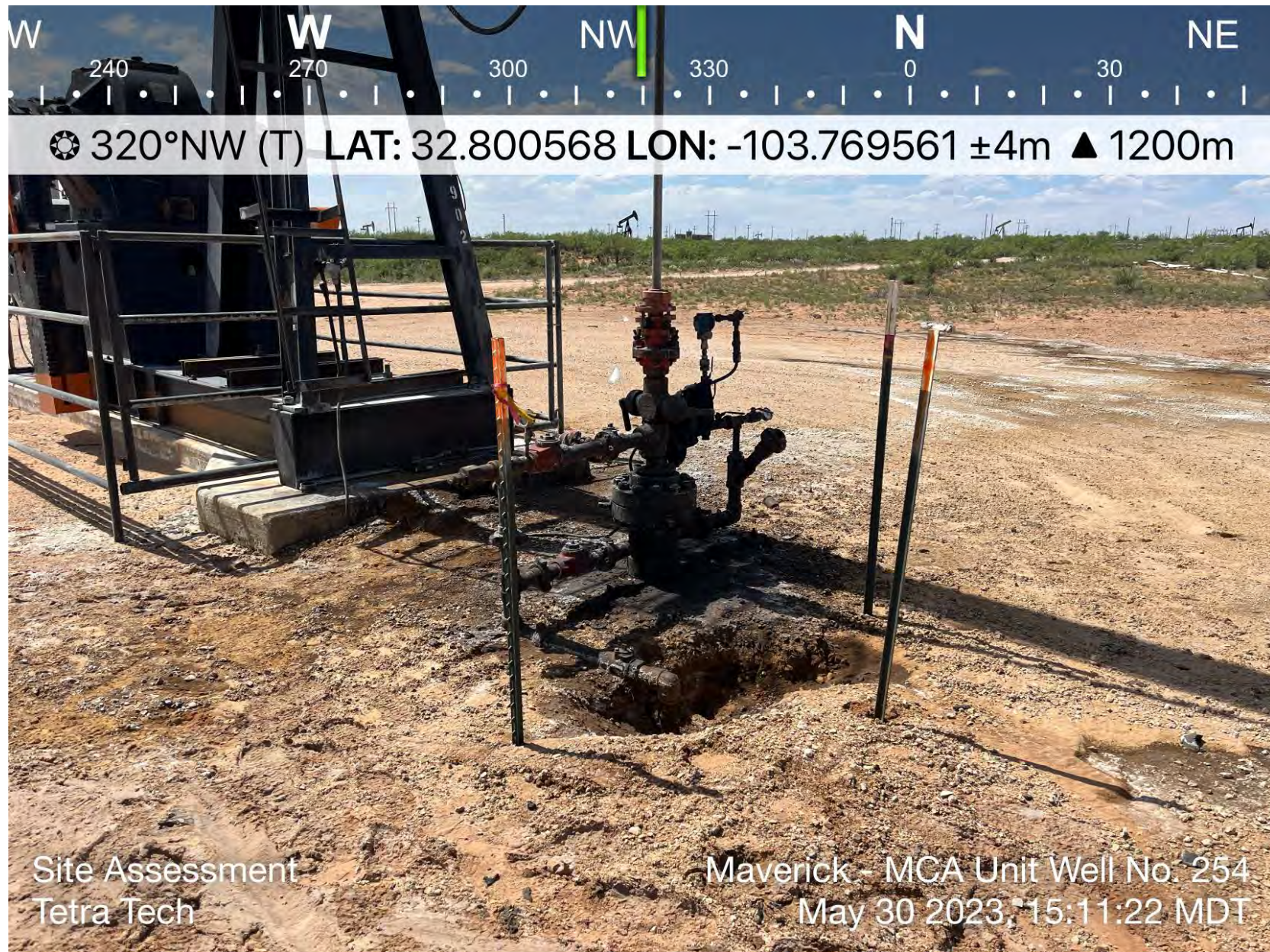




Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
2 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
3 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
4 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log

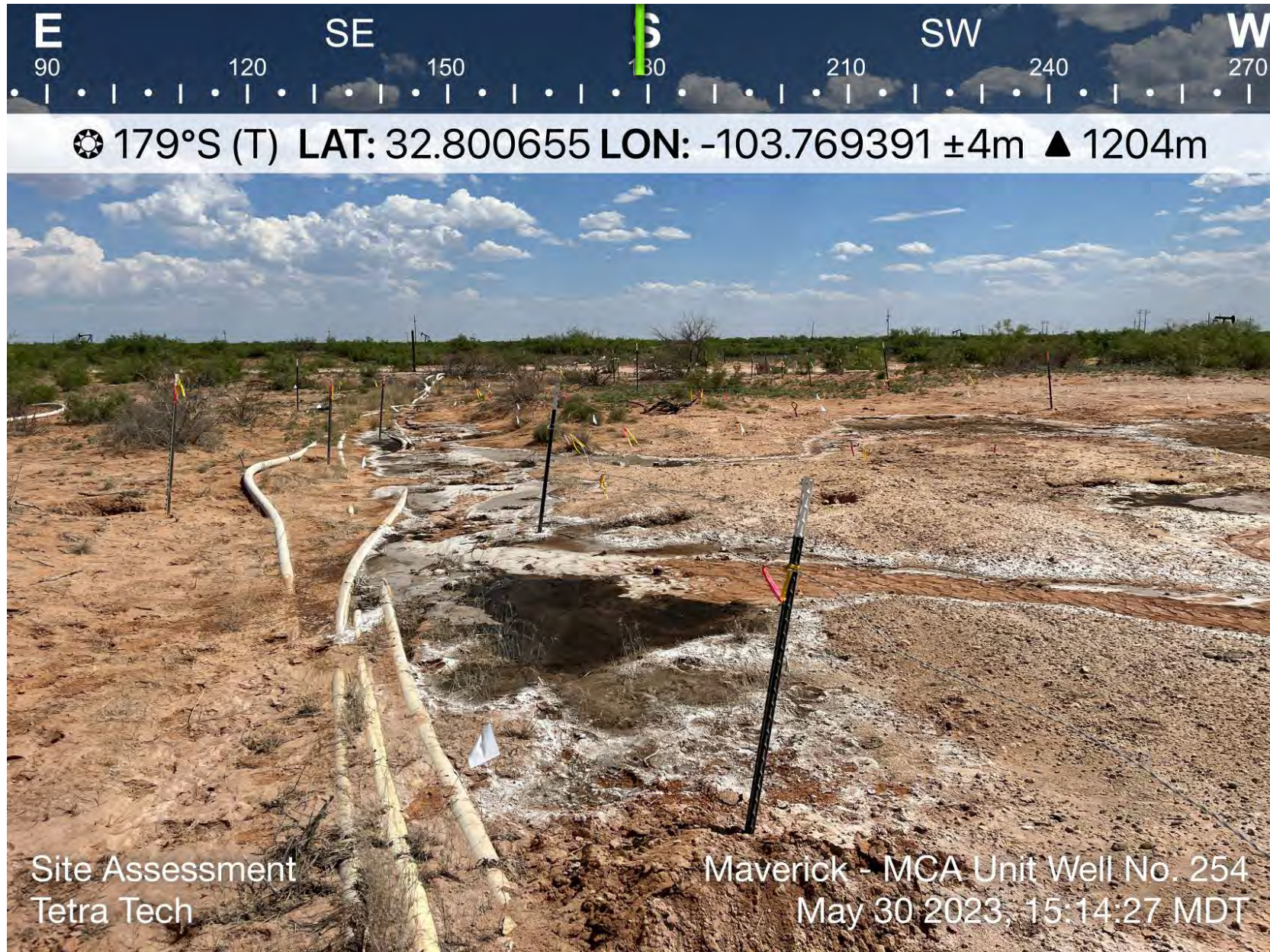



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5 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log

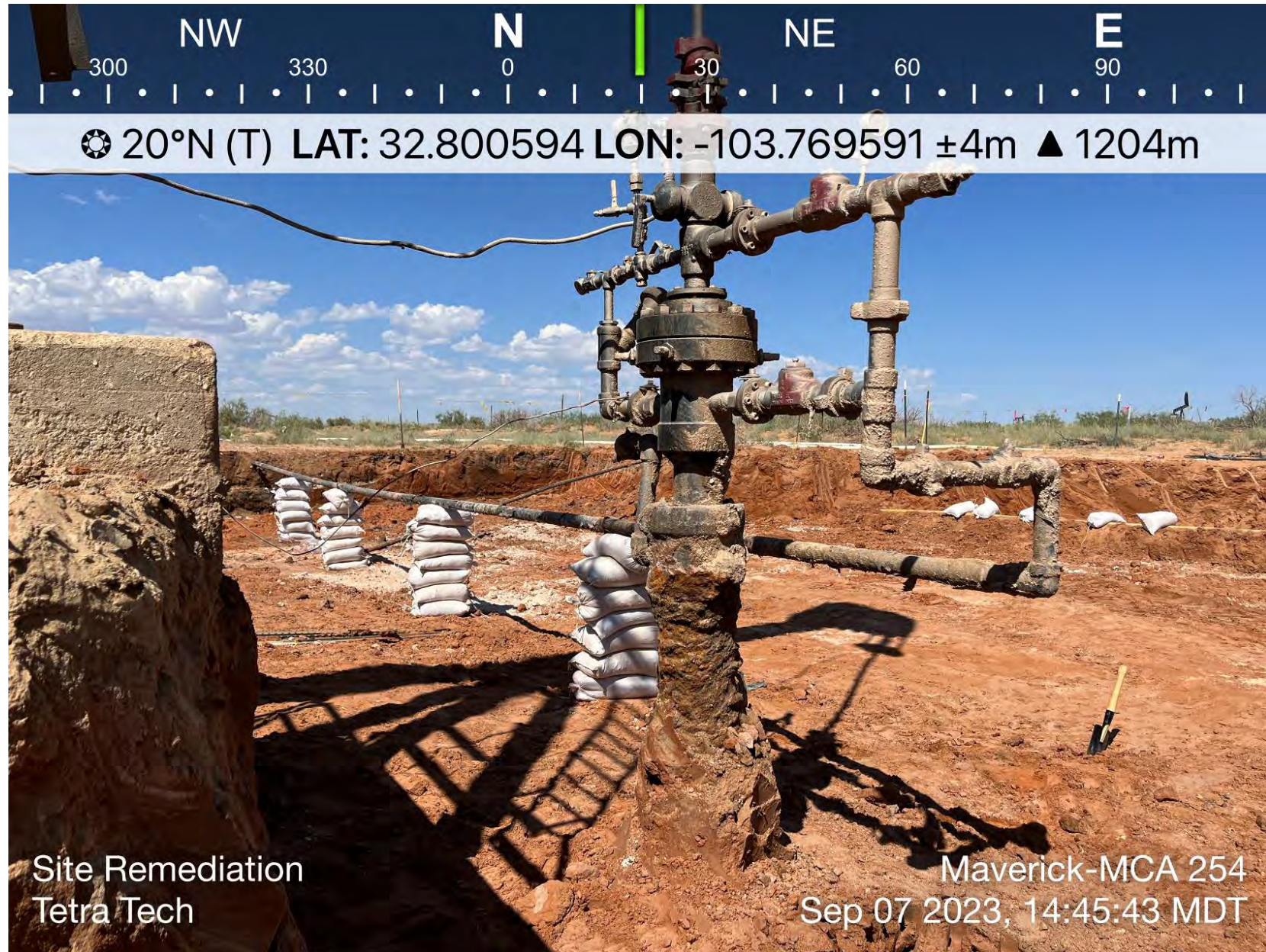




Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
6 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
7 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
8 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
9 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



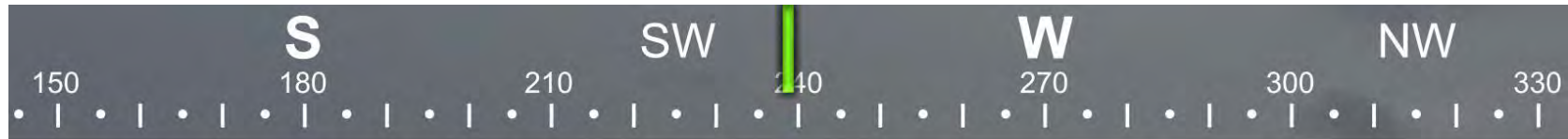
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10 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
11 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log




☀ 239°SW (T) LAT: 32.800229 LON: -103.769352 ±4m ▲ 1205m




Site Remediation
Tetra Tech

Maverick- MCA 254
Sep 12 2023, 14:17:36 MDT

Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
12 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
13 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
14 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
15 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log

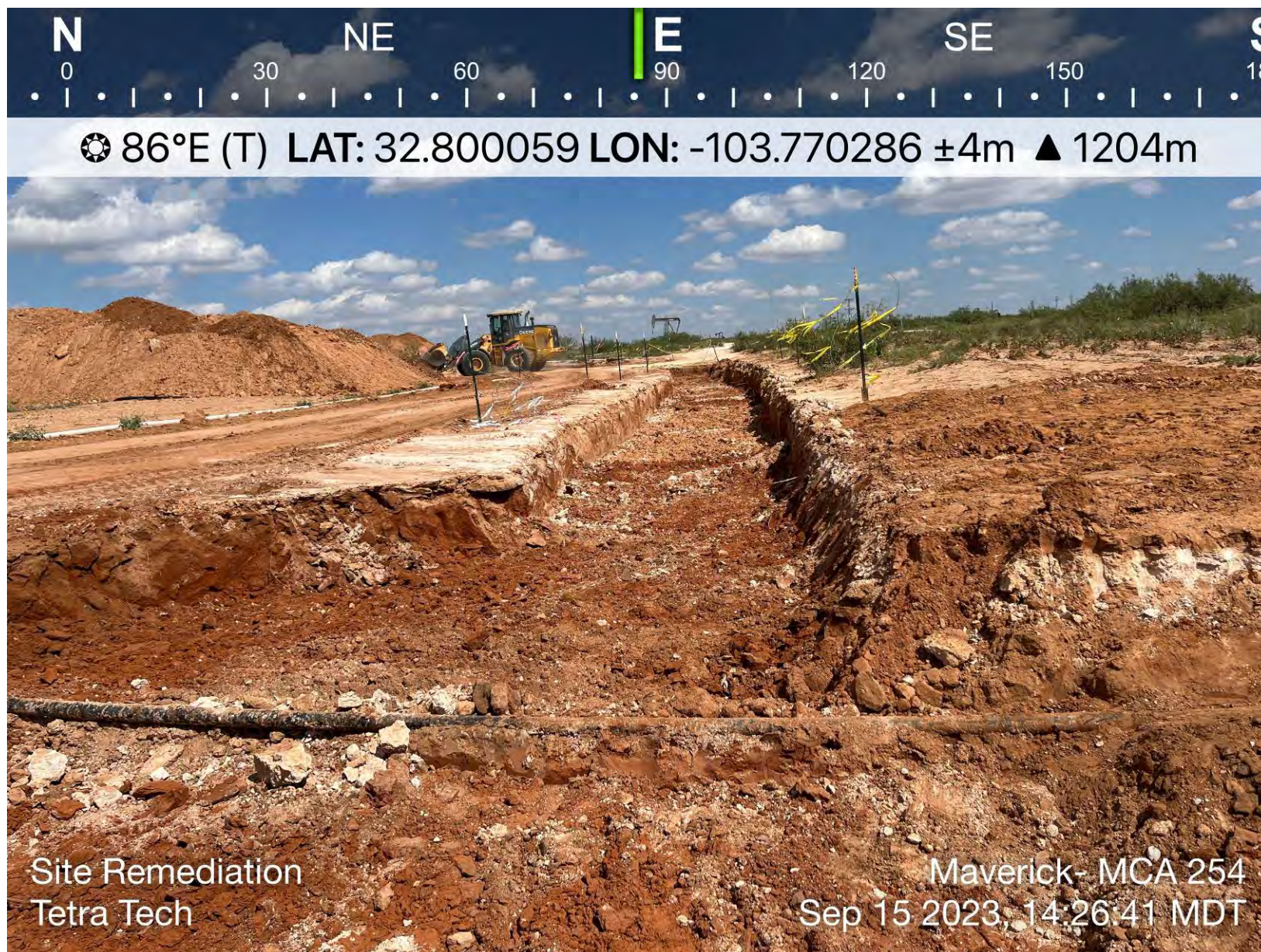




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16 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
17 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
18 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
19 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log

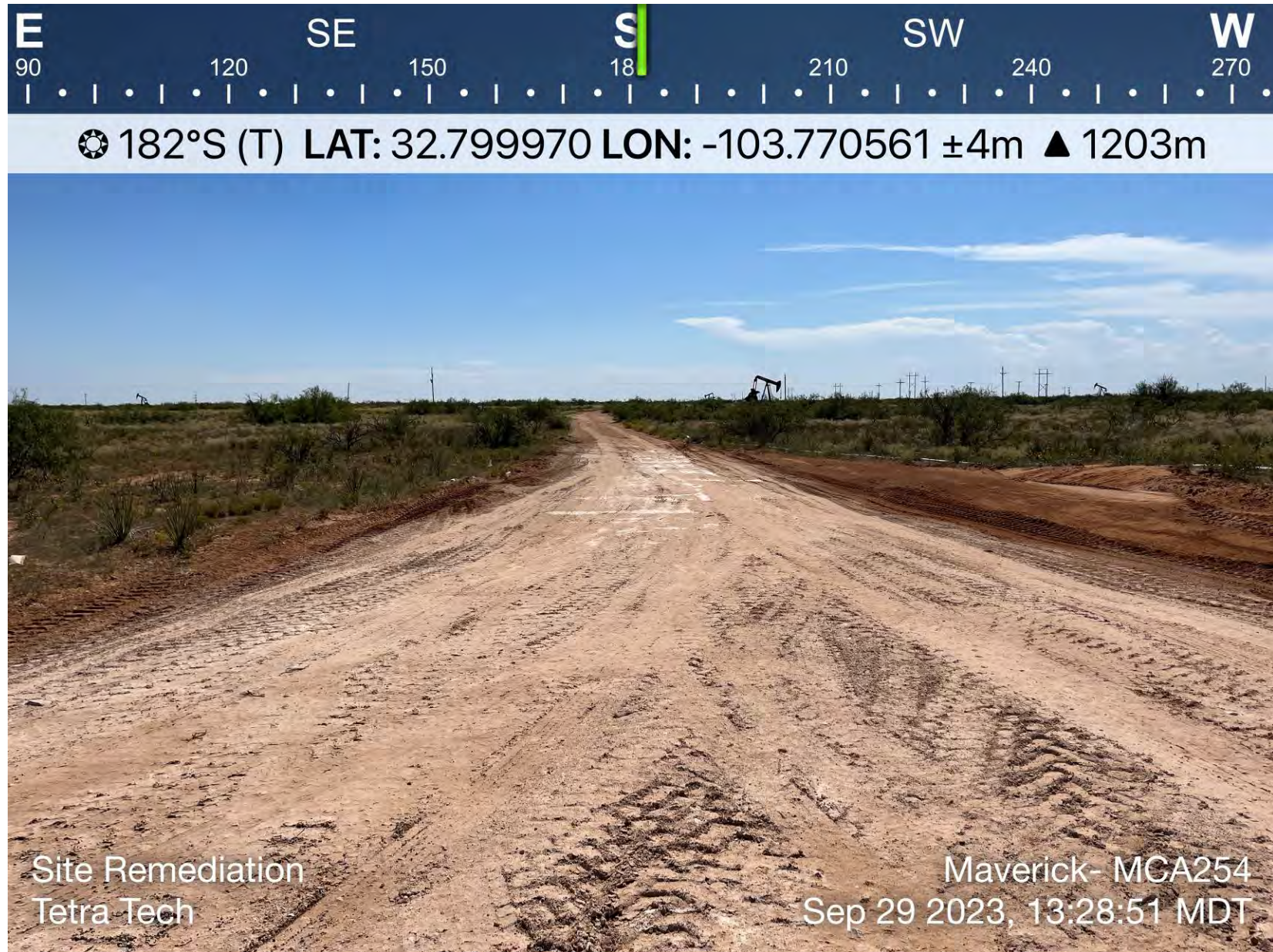




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20 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
21 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log

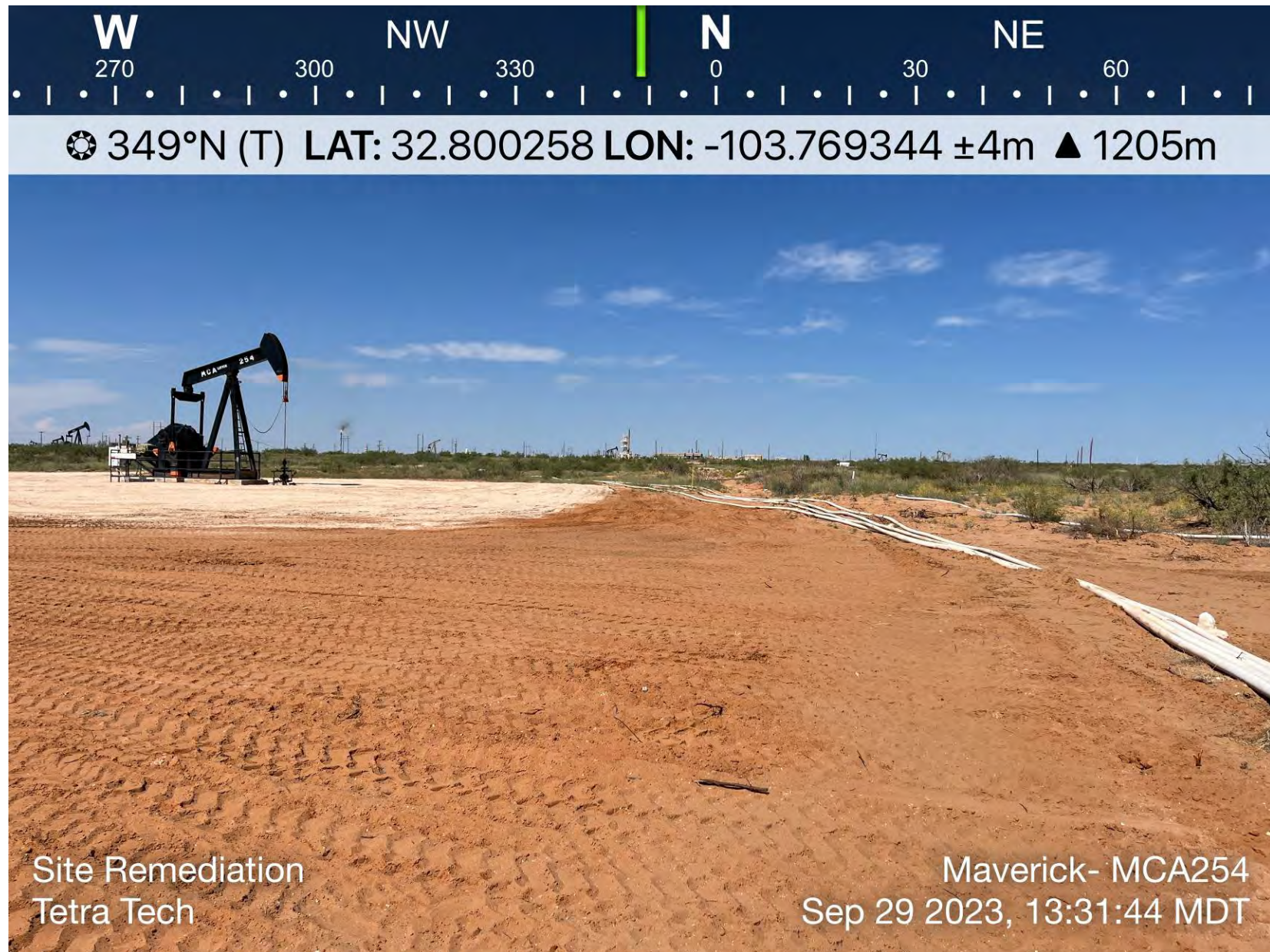




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22 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	


Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
23 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log



Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
24 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	

Photographic Log

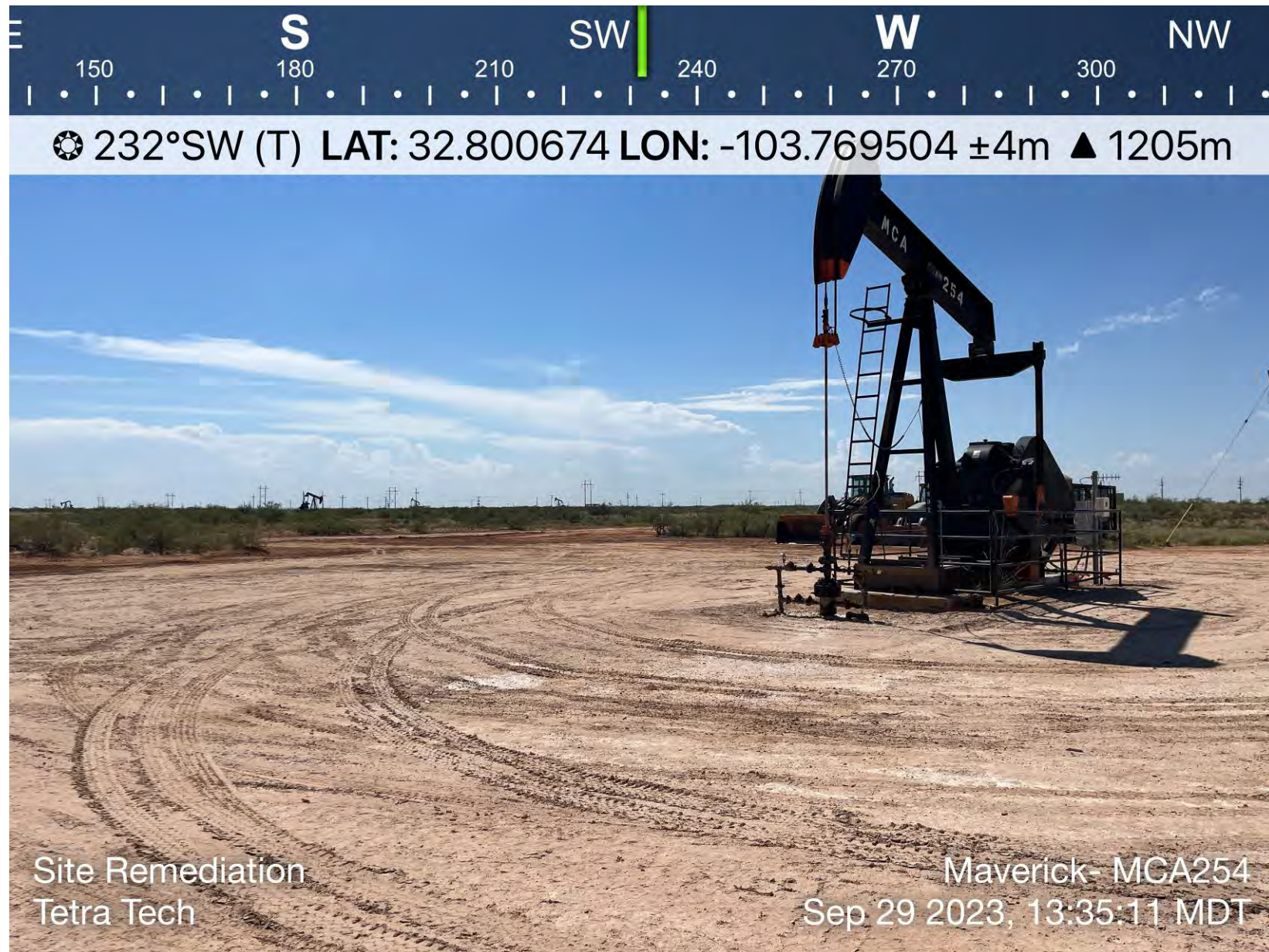



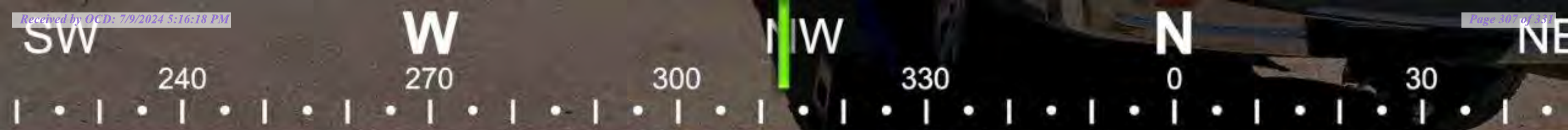
Photo Number:	Job Number:	Client:	Site Name:	NMOCD Incident	
25 of 25	212C-MD-03216	Maverick Permian, LLC	MCA 254 Flowline Release	nAPP2302035947	



☀ 317°NW (T) LAT: 32.800664 LON: -103.769708 ±4m ▲ 1202m

Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 24 2024, 09:24:54 MDT



☉ 313°NW (T) LAT: 32.800687 LON: -103.769526 ±4m ▲ 1205m



Site Remediation
Tetra Tech

Maverick- MCA 254 RS-2
Jun 24 2024, 10:12:34 MDT



☀ 233°SW (T) LAT: 32.800708 LON: -103.769510 ±4m ▲ 1205m

Site Remediation
Tetra Tech

Maverick- MCA 254 RS-2
Jun 24 2024, 10:12:45 MDT

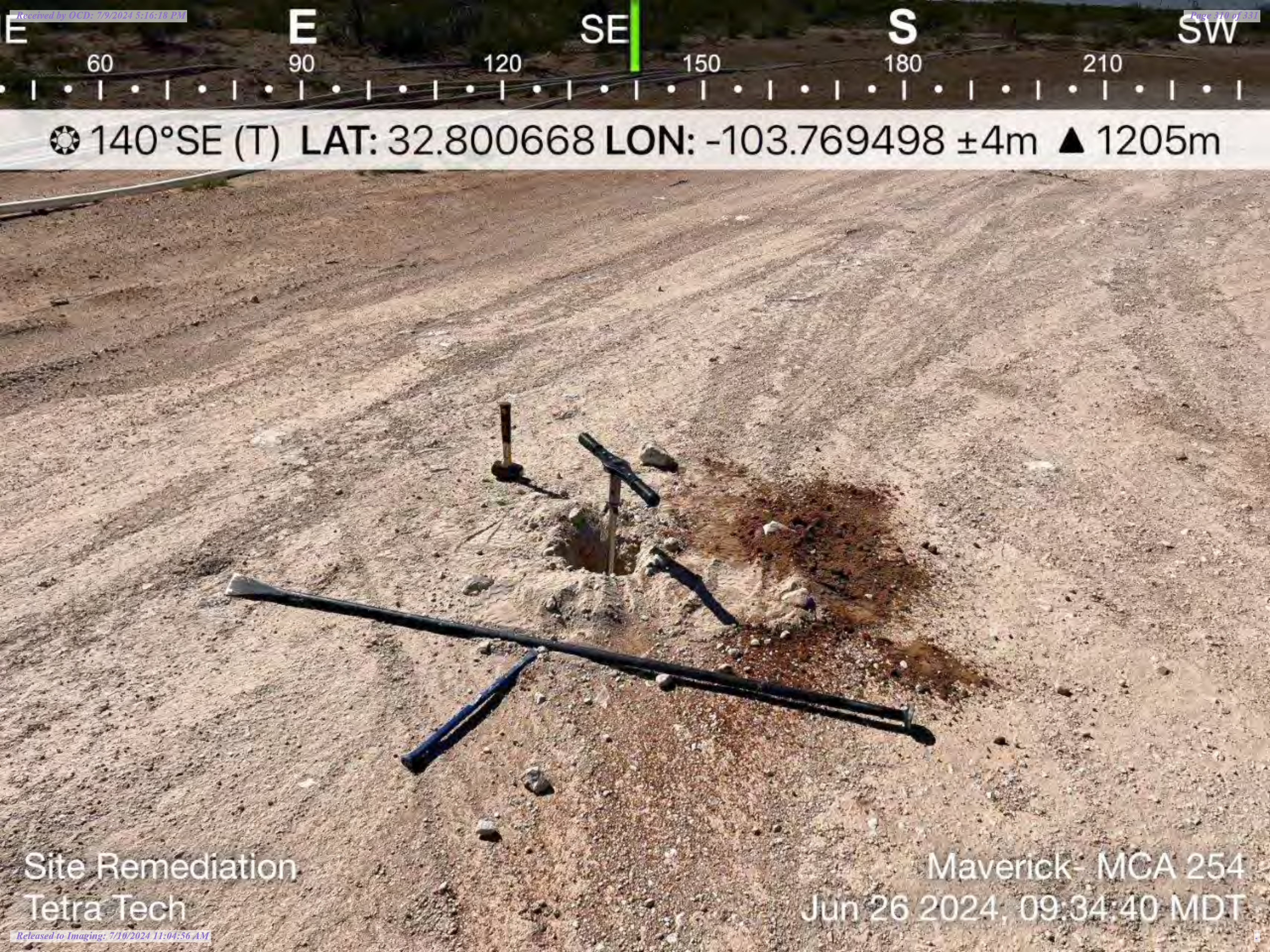
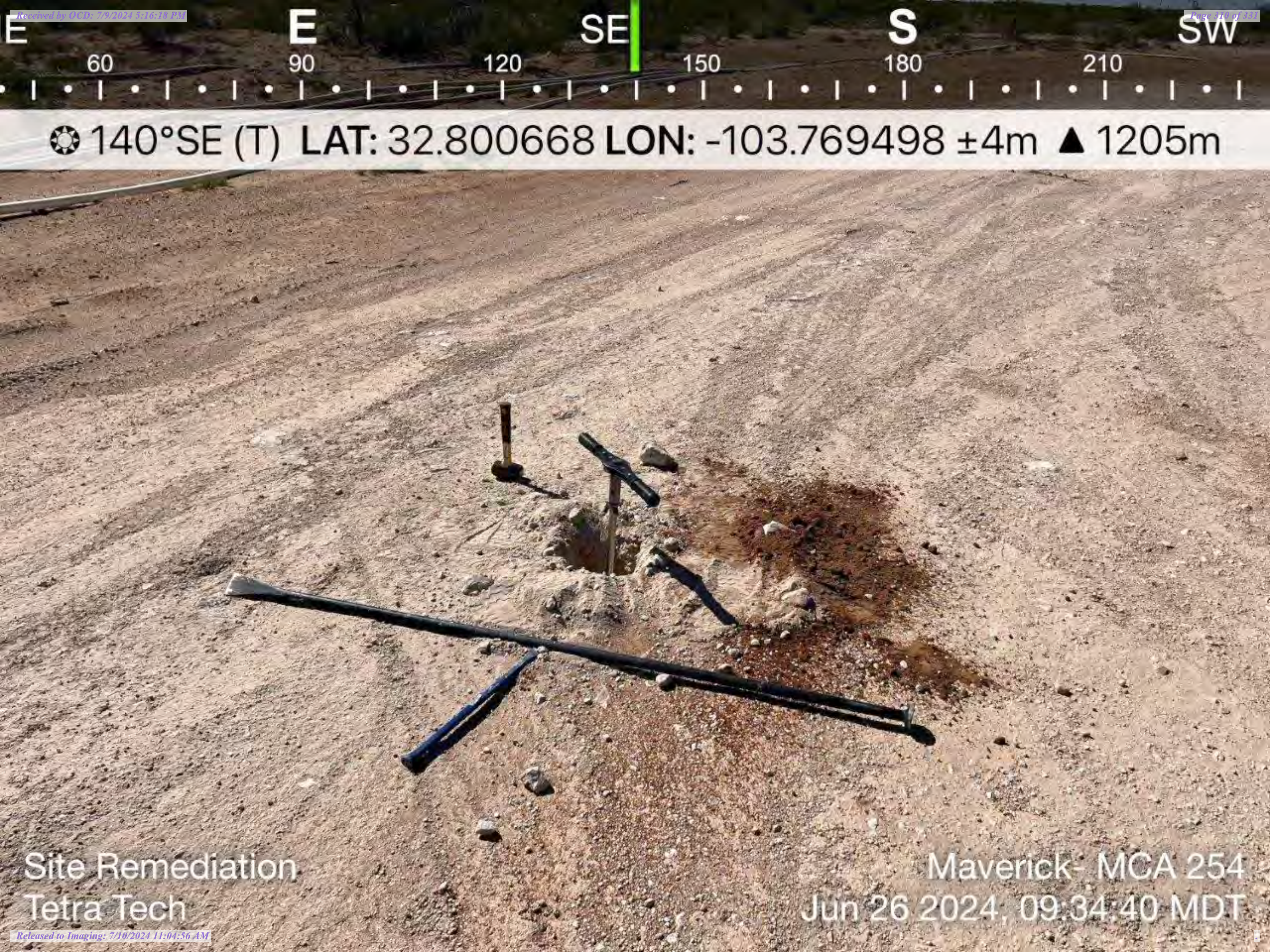


☉ 249°W (T) LAT: 32.800663 LON: -103.769593 ±4m ▲ 1204m



Site Remediation
Tetra Tech

Maverick- MCA 254 RS-3
Jun 24 2024, 11:08:04 MDT



⊙ 140°SE (T) LAT: 32.800668 LON: -103.769498 ±4m ▲ 1205m

Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 26 2024, 09:34:40 MDT



☉ 266°W (T) LAT: 32.800505 LON: -103.769597 ±4m ▲ 1203m

Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 26 2024, 10:06:31 MDT



☀ 307°NW (T) LAT: 32.800518 LON: -103.769442 ±35m ▲ 1200m



Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 26 2024, 10:47:22 MDT



☉ 254°W (T) LAT: 32.800572 LON: -103.769397 ±4m ▲ 1205m

Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 26 2024, 11:11:26 MDT



☉ 139°SE (T) LAT: 32.800458 LON: -103.769713 ±6m ▲ 1201m

Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 26 2024 12:09:04 MDT

N

NE

E

SE

0

30

60

90

120

150

☉ 67°NE (T) LAT: 32.818521 LON: -103.785444 ±13111m ▲ 1204m



Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 26 2024, 13:48:36 MDT

E

SE

S

SW

90

120

150

180

210

240

☉ 157°SE (T) LAT: 32.800416 LON: -103.769390 ±15m ▲ 1203m

Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 26 2024, 14:09:26 MDT

NW

N

NE

E

300

330

0

30

60

90

☀ 17°N (T) LAT: 32.800320 LON: -103.769293 ±5m ▲ 1202m



Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 26 2024, 14:45:56 MDT

NE

E

SE

S

30

60

90

120

150

180

☉ 111°E (T) LAT: 32.800238 LON: -103.769359 ±3m ▲ 1205m



Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 26 2024, 15:01:12 MDT



☉ 183°S (T) LAT: 32.8000041 LON: -103.770142 ±4m ▲ 1204m

Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 27 2024, 09:09:21 MDT



☉ 1°N (T) LAT: 32.799947 LON: -103.770282 ±8m ▲ 1206m

Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 27 2024, 09:46:20 MDT



☀ 168°S (T) LAT: 32.799878 LON: -103.770523 ±8m ▲ 1206m

Site Remediation
Tetra Tech

Maverick- MCA 254
Jun 27 2024, 10:40:36 MDT

Revised Assessment, Remediation, and Closure Report
Maverick Permian, LLC
MCA 254 Flowline Release
Incident ID: nAPP2302035947

July 12, 2024

ATTACHMENT 5 – SEED MIXTURE DETAILS

NMSLO Seed Mix**Sandy (S)****SANDY (S) SITES SEED MIXTURE:**

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	Elida, VNS, So.	2.0	F
Little bluestem	Cimarron, Pastura	3.0	F
Black grama	VNS, Southern	1.0	D
Sand dropseed	VNS, Southern	4.0	S
Plains bristlegrass	VNS, Southern	2.0	D
Forbs:			
Firewheel (Gaillardia)	VNS, Southern	1.0	D
Annual Sunflower	VNS, Southern	1.0	D
Shrubs:			
Fourwing Saltbush	VNS, Southern	1.0	F
Total PLS/acre		16.0	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box
VNS = Variety Not Stated, PLS = Pure Live Seed

- Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).
- VNS, Southern – Seed should be from a southern latitude collection of this species.
- Double seed application rate for broadcast or hydroseeding.
- If one species is not available, contact the SLO for an approved substitute; alternatively the SLO may require other species proportionately increased.
- Additional information on these seed species can be found on the USDA Plants Database website at <http://plants.usda.gov>.



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

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QUESTIONS

Action 362446

QUESTIONS

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:	331199
	Action Number:	362446
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2302035947
Incident Name	NAPP2302035947 MCA 254 @ 30-025-23487
Incident Type	Other
Incident Status	Remediation Closure Report Received
Incident Well	[30-025-23487] MCA UNIT #254

Location of Release Source	
Please answer all the questions in this group.	
Site Name	MCA 254
Date Release Discovered	01/02/2023
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Other
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Corrosion Flow Line - Production Crude Oil Released: 0 BBL Recovered: 0 BBL Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion Flow Line - Production Produced Water Released: 6 BBL Recovered: 0 BBL Lost: 6 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
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)	Not answered.

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QUESTIONS, Page 2

Action 362446

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:
	331199
	Action Number:
	362446
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	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: Chuck Terhune Title: Program Manager Email: chuck.terhune@tetrattech.com Date: 07/09/2024
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QUESTIONS, Page 3

Action 362446

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:	331199
	Action Number:	362446
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 75 and 100 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
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	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (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 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

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

Chloride	(EPA 300.0 or SM4500 Cl B)	5920
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	631
GRO+DRO	(EPA SW-846 Method 8015M)	414
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	08/31/2023
On what date will (or did) the final sampling or liner inspection occur	09/05/2023
On what date will (or was) the remediation complete(d)	09/30/2023
What is the estimated surface area (in square feet) that will be reclaimed	19000
What is the estimated volume (in cubic yards) that will be reclaimed	3204
What is the estimated surface area (in square feet) that will be remediated	19000
What is the estimated volume (in cubic yards) that will be remediated	3204

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 362446

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:	331199
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	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

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	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<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: Chuck Terhune Title: Program Manager Email: chuck.terhune@tetrattech.com Date: 07/09/2024
<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 362446

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 362446
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 362446

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:
	331199
	Action Number:
	362446
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	357656
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	06/28/2024
What was the (estimated) number of samples that were to be gathered	4
What was the sampling surface area in square feet	4000

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	19000
What was the total volume (cubic yards) remediated	3204
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	19000
What was the total volume (in cubic yards) reclaimed	3204
Summarize any additional remediation activities not included by answers (above)	Additional Grab Confirmation sampling conducted in June 2024 to comply with sampling notification requirements and validate 2020 composite confirmation sampling. All details are presented in the attached report.

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: Chuck Terhune Title: Program Manager Email: chuck.terhune@tetrattech.com Date: 07/09/2024
--	--

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Action 362446

QUESTIONS (continued)

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 362446
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 362446

CONDITIONS

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID:
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	Action Number:
	362446
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

CONDITIONS

Created By	Condition	Condition Date
scwells	Operator failed to provide proper Sampling Notification pursuant to 19.15.29.12.D.(1).(a) NMAC. Failure to provide proper sampling notice is a compliance issue and OCD may pursue compliance actions pursuant to 19.15.5 NMAC. Operator shall ensure future compliance with 19.15.29.12.D.(1).(a) NMAC	7/10/2024