



May 8, 2025

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

**Re: Site Assessment and Closure Request  
Maverick Permian, LLC  
Emerald Federal Battery  
Unit Letter J, Section 17, Township 17 South, Range 32 East  
Lea County, New Mexico  
NMOCD Incident ID# nAPP2412958102**

Dear Sir or Madam,

Tetra Tech, Inc. (Tetra Tech) was contracted by Maverick Permian, LLC (Maverick) to assist with the cleanup of a release of oil and produced water from the Emerald Federal Tank Battery, Unit Letter J, Section 17, Township 17 South, Range 32 East, in Lea County, New Mexico, at coordinates 32.832291°, -103.781284° (Site), as shown in **Figure 1**.

## BACKGROUND

On May 8, 2024, Maverick operations personnel identified a release from the Emerald Federal Tank Battery where approximately 38 bbls of produced water and 7 bbls of oil were released. During initial response, approximately 25 bbls of produced water and five bbls of oil were recovered by a vacuum truck. Tetra Tech reported the release to the New Mexico Oil Conservation Division (NMOCD) on behalf of Maverick on May 8, 2024, and the NMOCD assigned Incident ID nAPP2412958102. The release extent is shown in **Figure 1**.

## SITE CHARACTERIZATION

### Receptors

Tetra Tech performed a site characterization for the release location. It 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. The site characterization data is included in **Attachment 1**.

### Depth to Groundwater

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, no water wells are within ½ mile of the Site. The nearest well is approximately 1.61 miles away, and the depth to water was not recorded. The groundwater site characterization data are included in **Attachment 1**.

### Soils

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), the Site is mapped as having Pyote and Maljamar fine sands, 0 to 3 percent slopes, soil classified as a fine sand soil type. The USDA NCRS Soil Map and soil profile are provided in **Attachment 1**.

**Tetra Tech, Inc.**

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**Tel** +1.832.251.5160 | [tetrattech.com/oga](http://tetrattech.com/oga) | [tetrattech.com](http://tetrattech.com)

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## 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 for Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), Total Petroleum Hydrocarbons (TPH) 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 default to Reclamation Requirements for groundwater less than 50 feet bgs since no water wells were found within a ½ mile radius of the site with a recorded depth to water less than 25 years old. Reclamation Requirements are as follows:

### Reclamation Requirements

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

## INITIAL RESPONSE ACTIVITIES

The release occurred due to an overflow of a storage tank, releasing produced water onto an approximately 12,500-square-foot area on the well pad and northeast adjacent property, as shown in **Figure 3**. According to Site records, Maverick took initial response actions at the release site on May 8, 2024. Maverick responded to the site by using a vacuum truck.

## SITE ASSESSMENT ACTIVITIES

One (1) borehole (AH-1) was installed within the release footprint, 12 boreholes were installed downwind of the release area (AH-2 through AH-6 and H-1 through H-7) to a depth of 2 feet bgs to verify no wind-carried overspray had affected the area. Assessment boring samples were submitted for BTEX, TPH, and chloride analysis. **Table 2** presents assessment boring analytical results screened against Reclamation Requirements and **Attachment 2** presents the laboratory analytical data package.

## REMEDIATION AND CONFIRMATION SAMPLING

Excavation activities commenced on November 26, 2024, and concluded on January 17, 2025. Maverick's subcontractor, SDR Enterprises (SDR), used heavy equipment to excavate impacted soil from the remediation area to a maximum depths of 2.5 feet bgs. To avoid potential contact by heavy equipment with pressurized lines within the remediation area, heavy equipment was maintained at least 2 feet away from pressurized lines where hydro-excavation and hand-digging were employed.

SDR excavated 1,162 cubic yards of contaminated soil from an approximately 12,500-square-foot area and transported it to R360 Halfway Disposal and Landfill for off-site disposal. Photographs of the final excavation are provided in **Attachment 3**.

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## Confirmation Sampling Notification

On November 25, 2024, Tetra Tech notified the NMOCD and the NMSLO of the anticipated initial confirmation sampling by submitting a C-141N Sampling Notification in the NMOCD ePermitting portal to cover the final confirmation sampling conducted on May 2, 2025.

A total of 95 final confirmation samples including 63 base confirmation samples and 32 sidewall confirmation samples were collected and submitted to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico for analysis of TPH (GRO, DRO, and ORO) by EPA Method 8015M, BTEX by EPA Method 8021B, and chloride by EPA Method SM4500C-B.

## Confirmation Sampling

Upon reaching the final lateral and vertical excavation extents of the excavation, Tetra Tech collected 95 final confirmation samples, including 63 five-point composite floor samples and 32 five-point composite side wall samples from the excavated areas. The remediation excavation confirmation sampling area comprised a total area of 12,500 square feet and a sampling density of approximately one (1) confirmation sample per 198 square feet.

Samples were submitted to Cardinal Laboratory in Hobbs, New Mexico, to analyze BTEX by Method 8021B, TPH by Method 8015M, and chloride by Method SM4500 CI-B. Laboratory analytical results for final confirmation samples reported concentrations of BTEX, TPH, and chloride as less than the respective Reclamation Requirements, demonstrating clean margins, with the exception of samples collected in areas beneath production equipment that are subject to the below remediation deferral request. Confirmation sample laboratory analytical results screened against Reclamation Requirements are summarized in **Table 3**, and laboratory analytical data packages, including chain of custody documentation, are included in **Attachment 2**. Confirmation sampling locations and excavation extents are shown in **Figure 3**.

## Excavation Backfill

On January 20, 2025, subsequent to the receipt of final confirmation sampling results, SDR completed the backfilling of the excavated areas with 600 cubic yards of clean soil in the pasture and 600 cubic yards of clean caliche on the facility pad, sourced from Boyd Pit. Photographic Documentation showing the excavated areas and final grading after backfilling is provided in **Attachment 4**.

## Reclamation and Revegetation

To restore the impacted surface areas to the condition that existed prior to the release, the excavated areas have been backfilled with clean topsoil in the pasture and clean caliche on the facility pad. Disturbed areas of impacted pastureland have been graded back to match the surrounding topography and the pre-existing condition prior to contouring to provide erosion control, long-term stability, prevent ponding of water, and preserve surface water flow patterns.

Subsequent to restoring topography and contouring the disturbed areas, disturbed areas of the Site, the pasture areas were 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. Seeding was conducted via broadcast methods and then disced into the prepared seed bed at the application rates specified for broadcast seed application in pound pure live seed per acre according to the NMSLO Seed Mix data sheet provided in **Attachment 4**.

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## DEFERRAL REQUEST

Subsequent to remediation of accessible areas, contamination remains at concentrations greater than Reclamation Requirements in the upper 4 feet bgs on the facility pad in the vicinity of pipe footings and heater treaters at BH-24, BH-27, BH-28, BH-62, and BH-63.

The impacts at these locations are vertically delineated with vertical delineation samples and horizontally delineated by base or sidewall confirmation samples, as shown in **Figure 3**.

A major facility deconstruction would be required to remediate the approximately 520, 95, 25, and 10 square foot areas shown in **Figure 4**, where heater treaters, pipe rack footings, and a power pole currently prevent access to complete remediation.

Maverick respectfully requests that the NMOCD approve a deferral of remediation, restoration, and reclamation in the four discrete areas shown in **Figure 4** area when the facility is decommissioned at the end of life. **Figure 5** depicts the proposed lateral and vertical deferral extents with coordinates delineating the lateral boundaries. If the deferral request is approved, final remediation and reclamation shall occur in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the facility is deconstructed.

## CONCLUSIONS

Based on the results of the confirmation sampling, all accessible soil within the release footprint impacted by chloride or TPH concentrations above applicable Reclamation Requirements and/or RRALs has been removed and properly disposed of offsite, and the excavated area has been backfilled with clean material. Site remediation is complete with the exception of the deferral areas detailed above and shown in **Figure 5**. The backfilled areas have been restored to match the former pad footprint and areas in the pasture have been graded and seeded to aid in vegetation growth. The seed mixture to used is provided in **Attachment 4**. If you have any questions concerning the remediation activities for the Site, please call me 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 and Topographic Map
- Figure 2 – Release Extent and Site Assessment Map
- Figure 3 – Remediation Extents and Confirmation Sampling Map
- Figure 4 – Deferred Remediation Area Map

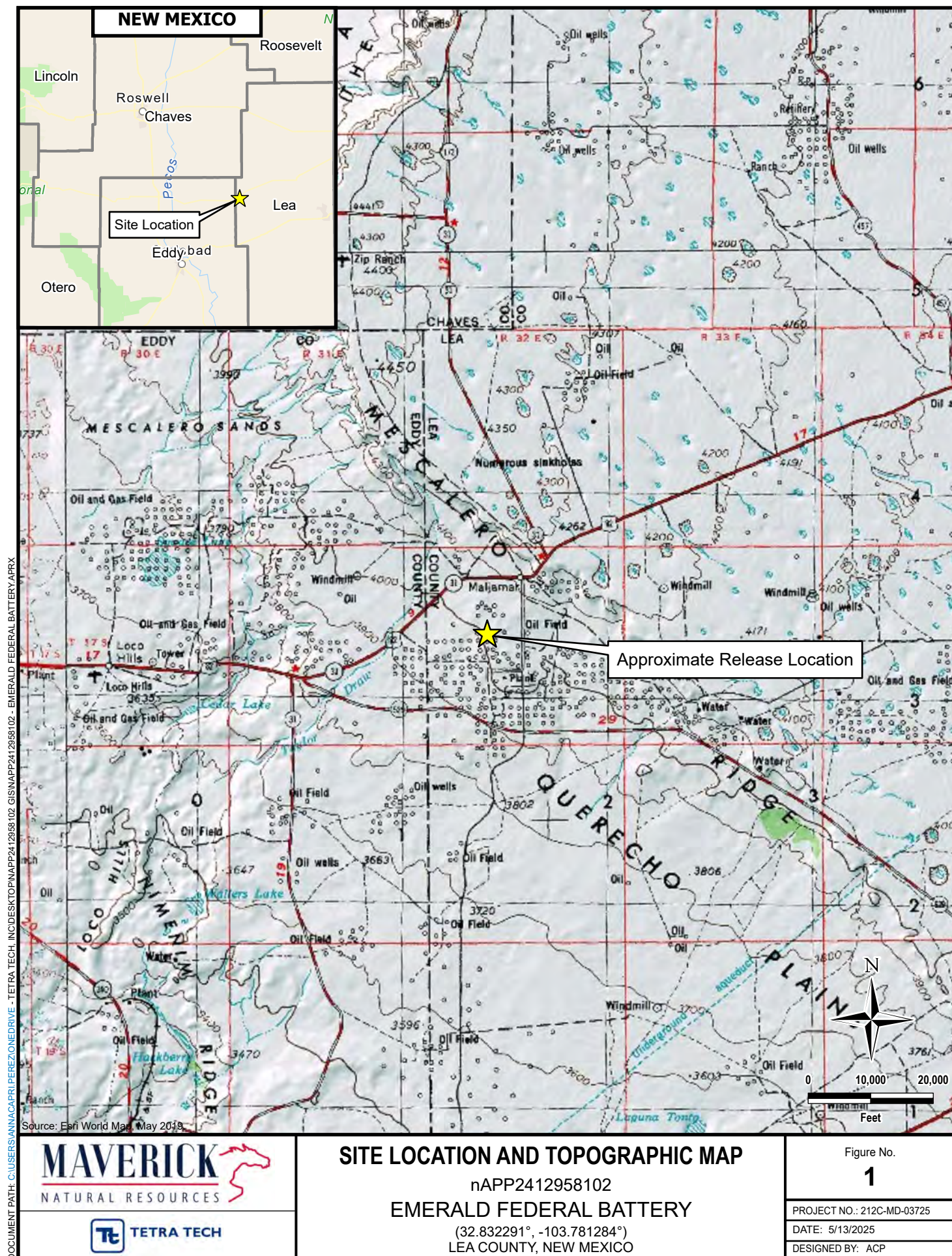
### Attachment

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

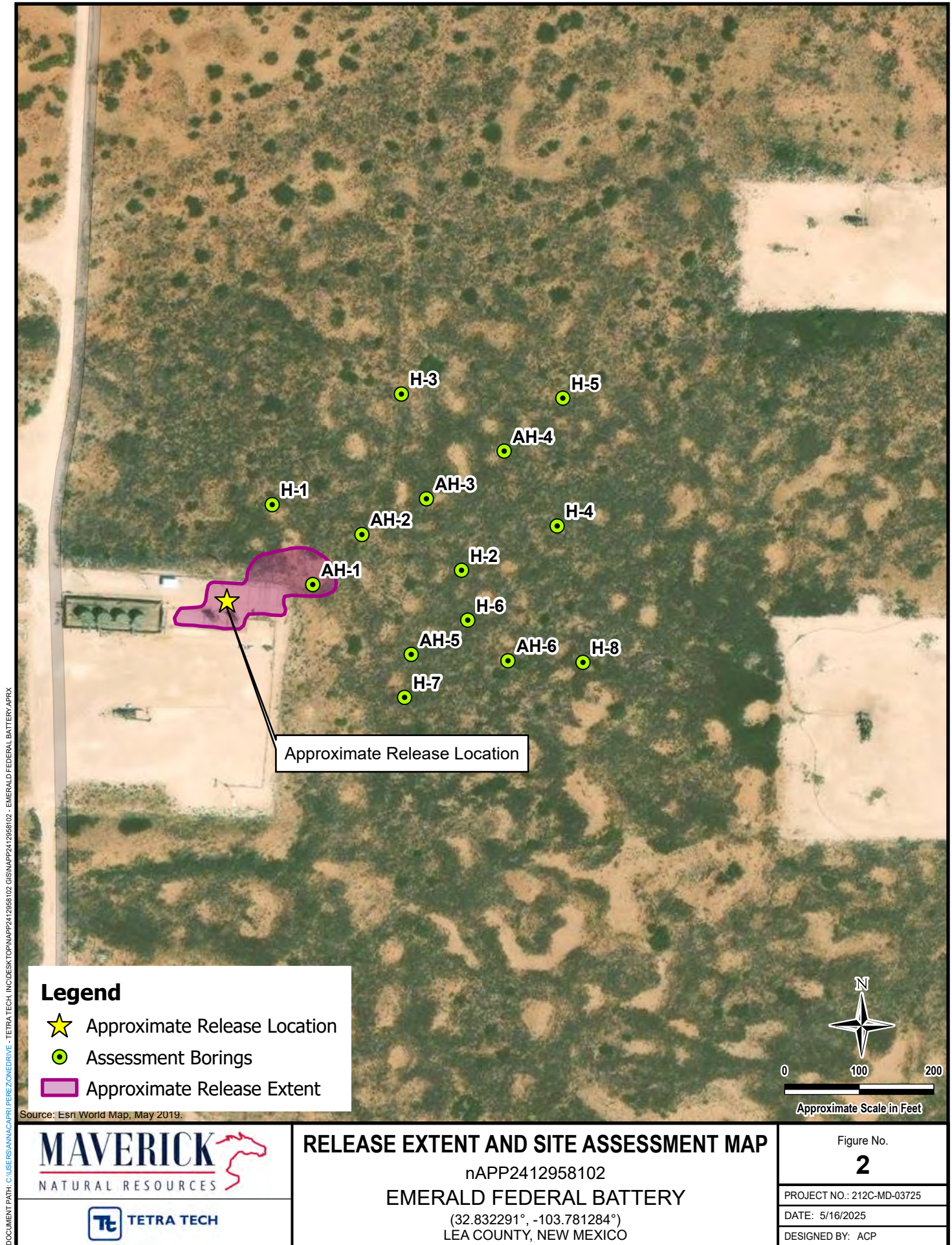
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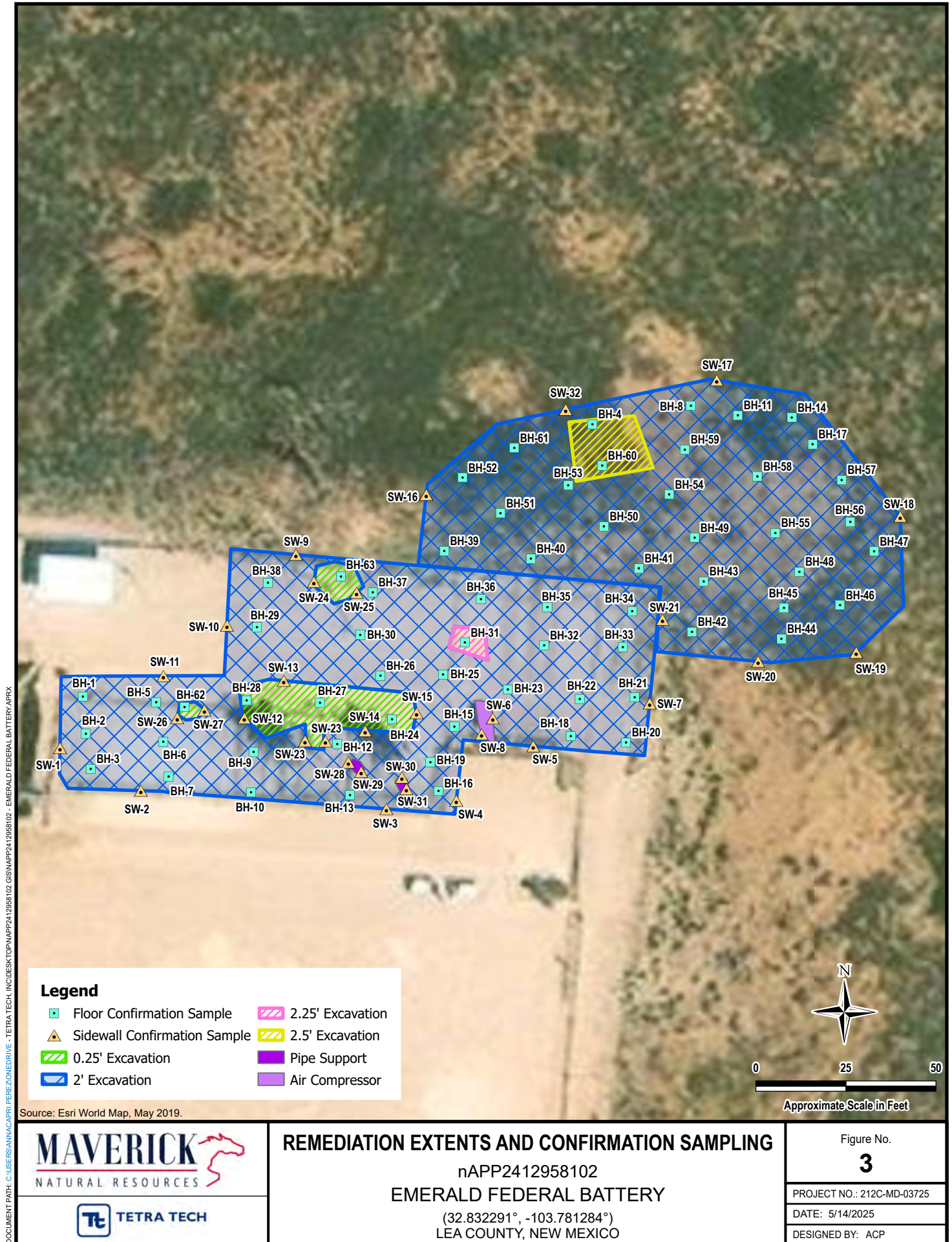
## FIGURES



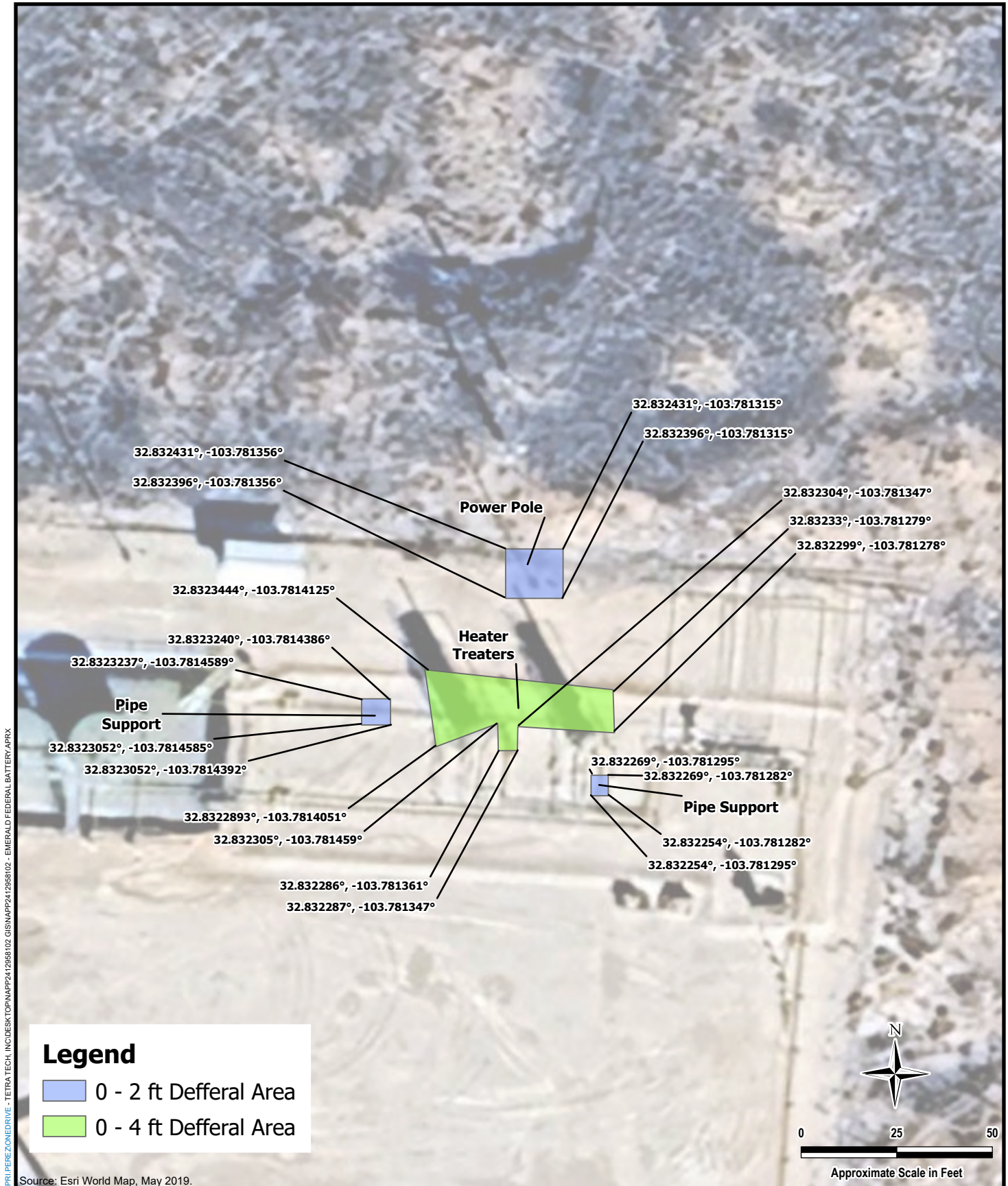














 	<p align="center"><b>DEFFERAL REMEDIATION AREA MAP</b></p> <p align="center">nAPP2412958102</p> <p align="center"><b>EMERALD FEDERAL BATTERY</b></p> <p align="center">(32.832291°, -103.781284°)</p> <p align="center">LEA COUNTY, NEW MEXICO</p>	<p align="center">Figure No.</p> <p align="center"><b>4</b></p> <hr/> <p>PROJECT NO.: 212C-MD-03725</p> <hr/> <p>DATE: 5/16/2025</p> <hr/> <p>DESIGNED BY: ACP</p>
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## TABLES



**TETRA TECH**

TABLE 1

**SOIL ASSESSMENT LOCATIONS**  
**INCIDENT ID NAPP2412958102**  
**MAVERICK PERMIAN, LLC**  
**EMERALD FEDERAL BATTERY RELEASE**  
**LEA COUNTY, NEW MEXICO**

Boring ID	Date	Latitude	Longitude
AH-1	12/6/2024	32.832415	-103.781015
AH-2	12/6/2024	32.832599	-103.780835
AH-3	12/6/2024	32.832730	-103.780598
AH-4	12/6/2024	32.832905	-103.780312
AH-5	12/6/2024	32.832159	-103.780654
AH-6	12/6/2024	32.832135	-103.780298
H-1	12/6/2024	32.832708	-103.781164
H-2	12/6/2024	32.832467	-103.780469
H-3	12/6/2024	32.833114	-103.780690
H-4	12/6/2024	32.832630	-103.780117
H-5	12/6/2024	32.833099	-103.780097
H-6	12/6/2024	32.832284	-103.780446
H-7	12/6/2024	32.832001	-103.780678
H-8	12/6/2024	32.832129	-103.780023



**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS**  
**SOIL ASSESSMENT SAMPLING - INCIDENT NAPP2412958102**  
**MAVERICK PERMIAN, LLC**  
**EMERALD FEDERAL BATTERY RELEASE**  
**LEA COUNTY, NEW MEXICO**

Sample ID	Sample Date	Sample Depth	Chloride <sup>1</sup>		BTEX <sup>2</sup>										TPH <sup>3</sup>							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH	
		C <sub>6</sub> - C <sub>10</sub>	> C <sub>10</sub> - C <sub>28</sub>	> C <sub>28</sub> - C <sub>36</sub>	(GRO+DRO+EXT DRO)	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	
AH - 1 (0-1')	12/6/2024	0.0 - 1.0	1,600		<0.050		<0.050		<0.050		<0.150		<0.300		<50.0		2430		970		3,400	
AH - 1 (1-2')	12/6/2024	1.0 - 2.0	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		20.6		<10.0		20.6	
AH - 2 (0-1')	12/6/2024	0.0 - 1.0	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
AH - 2 (1-2')	12/6/2024	1.0 - 2.0	128		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		24.2		<10.0		24.2	
AH - 3 (0-1')	12/6/2024	0.0 - 1.0	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
AH - 3 (1-2')	12/6/2024	1.0 - 2.0	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
AH - 4 (0-1')	12/6/2024	0.0 - 1.0	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
AH - 4 (1-2')	12/6/2024	1.0 - 2.0	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
AH - 5 (0-1')	12/6/2024	0.0 - 1.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
AH - 5 (1-2')	12/6/2024	1.0 - 2.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
AH - 6 (0-1')	12/6/2024	0.0 - 1.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
AH - 6 (1-2')	12/6/2024	1.0 - 2.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
H - 1 (0-1')	12/6/2024	0.0 - 1.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
H - 2 (0-1')	12/6/2024	0.0 - 1.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
H - 3 (0-1')	12/6/2024	0.0 - 1.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
H - 4 (0-1')	12/6/2024	0.0 - 1.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
H - 5 (0-1')	12/6/2024	0.0 - 1.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
H - 6 (0-1')	12/6/2024	0.0 - 1.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
H - 7 (0-1')	12/6/2024	0.0 - 1.0	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	

**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 3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**SOIL CONFIRMATION SAMPLING - INCIDENT NAPP2412958102**  
**MAVERICK PERMIAN, LLC**  
**EMERALD FEDERAL BATTERY RELEASE**  
**LEA COUNTY, NEW MEXICO**

Sample ID	Sample Date	Sample Depth	Chloride <sup>1</sup>		BTEX <sup>2</sup>										TPH <sup>3</sup>							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)	
		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	
BH - 1 (2.0')	12/19/2024	2.0 - 2.5	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		22.2		<10.0		22.2	
BH - 2 (2.0')	12/19/2024	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 3 (2.0')	12/19/2024	2.0 - 2.5	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 4 (2.0')	1/8/2025	2.0 - 2.5	176		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 5 (2.0')	12/19/2024	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 6 (2.0')	12/19/2024	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		12.2		<10.0		12.2	
BH - 7 (2.0')	12/19/2024	2.0 - 2.5	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		39.8		<10.0		39.8	
BH - 8 (2.0')	1/8/2025	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 9 (2.0')	12/19/2024	2.0 - 2.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		29.4		<10.0		29.4	
BH - 10 (2.0')	12/19/2024	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 11 (2.0')	1/8/2025	2.0 - 2.5	192		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 12 (2.0')	12/16/2024	2.0 - 2.5	208		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 13 (2.0')	12/19/2024	2.0 - 2.5	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 14 (2.0')	1/8/2025	2.0 - 2.5	288		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 15 (2.0')	12/19/2024	2.0 - 2.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		25.9		<10.0		25.9	
BH - 16 (2.0')	12/16/2024	2.0 - 2.5	400		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		11		<10.0		11	
BH - 17 (2.0')	1/10/2025	2.0 - 2.5	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 18 (2.0')	12/12/2024	2.0 - 2.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 19 (2.0')	12/16/2024	2.0 - 2.5	144		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		23.8		<10.0		23.8	
BH - 20 (2.0')	12/16/2024	2.0 - 2.5	176		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		35.9		10.6		46.5	
BH - 21 (2.0')	12/12/2024	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 22 (2.0')	12/12/2024	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 23 (2.0')	12/12/2024	2.0 - 2.5	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 24 (.25')	12/20/2024	0.0 - 0.25	23,200		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		44.1		<10.0		44.1	
BH - 24 (4.0')	5/2/2025	4.0 - 4.5	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 25 (2.0')	1/6/2025	2.0 - 2.5	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 26 (2.0')	1/6/2025	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 27 (.25')	12/20/2024	0.0 - 0.25	37,200		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		2,270		633		2,903	
BH - 27 (4.0')	5/2/2025	0.0 - 0.25	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 28 (.25')	12/20/2024	0.0 - 0.25	5,360		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		174		60.3		234.3	
BH - 28 (4.0')	5/2/2025	0.0 - 0.25	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 29 (2.0')	12/19/2024	2.0 - 2.5	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 30 (2.0')	12/19/2024	2.0 - 2.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		18.4		<10.0		18.4	
BH - 31 (2.0')	12/16/2024	2.0 - 2.5	624		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		16.3		<10.0		16.3	
BH - 31 (2.25')	1/6/2025	2.25 - 2.75	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 31 (4.0')	5/2/2025	2.25 - 2.75	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
BH - 32 (2.0')	12/12/2024	2.0 - 2.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	



**TABLE 3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**SOIL CONFIRMATION SAMPLING - INCIDENT NAPP2412958102**  
**MAVERICK PERMIAN, LLC**  
**EMERALD FEDERAL BATTERY RELEASE**  
**LEA COUNTY, NEW MEXICO**

Sample ID	Sample Date	Sample Depth	Chloride <sup>1</sup>		BTEX <sup>2</sup>										TPH <sup>3</sup>									
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)			
		feet bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	C <sub>6</sub> - C <sub>10</sub>	mg/kg	Q	> C <sub>10</sub> - C <sub>28</sub>	mg/kg	Q	> C <sub>28</sub> - C <sub>36</sub>	mg/kg	Q	mg/kg
Reclamation Requirements (19.15.29 NMAC)			600		10								50											100
BH - 33 ( 2.0' )	12/12/2024	2.0 - 2.5	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 34 ( 2.0' )	12/12/2024	2.0 - 2.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 35 ( 2.0' )	12/12/2024	2.0 - 2.5	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 36 ( 2.0' )	12/16/2024	2.0 - 2.5	480		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		16.4		<10.0				16.4	
BH - 37 ( 2.0' )	12/19/2024	2.0 - 2.5	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		22.7		<10.0				22.7	
BH - 38 ( 2.0' )	12/19/2024	2.0 - 2.5	112		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		10.6		<10.0				10.6	
BH - 39 ( 2.0' )	1/6/2025	2.0 - 2.5	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		26.1		<10.0				26.1	
BH - 40 ( 2.0' )	1/6/2025	2.0 - 2.5	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		13		<10.0				13	
BH - 41 ( 2.0' )	1/10/2025	2.0 - 2.5	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 42 ( 2.0' )	1/8/2025	2.0 - 2.5	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 43 ( 2.0' )	1/8/2025	2.0 - 2.5	464		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		12.7		<10.0				12.7	
BH - 44 ( 2.0' )	1/8/2025	2.0 - 2.5	160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 45 ( 2.0' )	1/8/2025	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 45 ( 2.0' )	1/10/2025	2.0 - 2.5	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 46 ( 2.0' )	1/8/2025	2.0 - 2.5	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 47 ( 2.0' )	1/8/2025	2.0 - 2.5	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 48 ( 2.0' )	1/8/2025	2.0 - 2.5	224		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 49 ( 2.0' )	1/8/2025	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 50 ( 2.0' )	1/8/2025	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 51 ( 2.0' )	1/6/2025	2.0 - 2.5	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		12.1		<10.0				12.1	
BH - 52 ( 2.0' )	1/8/2025	2.0 - 2.5	304		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 53 ( 2.0' )	1/8/2025	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 53 ( 2.0' )	1/10/2025	2.0 - 2.5	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 54 ( 2.0' )	1/8/2025	2.0 - 2.5	176		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 55 ( 2.0' )	1/8/2025	2.0 - 2.5	480		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 56 ( 2.0' )	1/8/2025	2.0 - 2.5	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 57 ( 2.0' )	1/8/2025	2.0 - 2.5	208		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 58 ( 2.0' )	1/8/2025	2.0 - 2.5	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 59 ( 2.0' )	1/8/2025	2.0 - 2.5	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 60 ( 2.0' )	1/8/2025	2.0 - 2.5	1,200		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		52.2		<10.0				52.2	
BH - 60 ( 2.5' )	1/16/2025	2.5 - 3.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 61 ( 2.0' )	1/8/2025	2.0 - 2.5	176		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
BH - 62 ( .25' )	12/20/2024	0.25 - 0.75	208		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		243		53.1				296.1	
BH - 63 ( .25' )	12/20/2024	0.25 - 0.75	2,360		<0.050		<0.050		0.197		0.561		0.772		62		9,450		2,550				12,062	
SW - 1	12/20/2024	0.0 - 2.0	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
SW - 2	12/20/2024	0.0 - 2.0	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	
SW - 3	12/20/2024	0.0 - 2.0	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0				-	



**TABLE 3**  
**SUMMARY OF ANALYTICAL RESULTS**  
**SOIL CONFIRMATION SAMPLING - INCIDENT NAPP2412958102**  
**MAVERICK PERMIAN, LLC**  
**EMERALD FEDERAL BATTERY RELEASE**  
**LEA COUNTY, NEW MEXICO**

Sample ID	Sample Date	Sample Depth	Chloride <sup>1</sup>		BTEX <sup>2</sup>										TPH <sup>3</sup>							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH	
		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	(GRO+DRO+EXT DRO)	
Reclamation Requirements (19.15.29 NMAC)			600		10								50							100		
SW - 4	12/20/2024	0.0 - 2.0	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 5	12/12/2024		144		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 6	12/16/2024		320		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 7	12/12/2024		128		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 8	12/16/2024		240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 9	12/20/2024	0.0 - 2.0	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 10	12/20/2024	0.0 - 2.0	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 11	12/20/2024	0.0 - 2.0	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 12	12/20/2024	0.0 - 2.0	1,300		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		2,210		711		2,921	
SW - 13	12/20/2024	0.0 - 2.0	10,300		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		126		23.1		149.1	
SW - 14	12/20/2024	0.0 - 2.0	13,300		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		69.9		11.5		81.4	
SW - 15	12/20/2024	0.0 - 2.0	11,600		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		70.3		17.4		87.7	
SW - 16	1/6/2025	0.0 - 2.0	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		18.3		<10.0		18.3	
SW - 17	1/8/2025	0.0 - 2.0	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 18	1/8/2025	0.0 - 2.0	224		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 19	1/8/2025	0.0 - 2.0	160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 20	1/8/2025	0.0 - 2.0	688		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		17.8		<10.0		17.8	
SW - 20	1/16/2025	0.0 - 2.0	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 21	1/8/2025	0.0 - 2.0	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 22	12/20/2024	0.0 - 2.0	208		<0.050		<0.050		<0.050		<0.150		<0.300		14.8		1,850		483		2,348	
SW - 23	12/20/2024	0.0 - 2.0	720		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 24	12/20/2024	0.0 - 2.0	5,440		<0.050		<0.050		<0.050		0.266		0.307		<100		5,050		1,110		6,160	
SW - 25	1/6/2025	0.0 - 2.0	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 26	12/20/2024	0.0 - 2.0	880		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		33		<10.0		33	
SW - 27	12/20/2024	0.0 - 2.0	416		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 27	12/20/2024	0.0 - 2.0	416		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 28	1/6/2025	0.0 - 2.0	576		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 29	1/6/2025	0.0 - 2.0	208		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 30	1/6/2025	0.0 - 2.0	640		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 31	1/6/2025	0.0 - 2.0	1,540		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
SW - 32	1/8/2025	0.0 - 2.0	160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	

**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

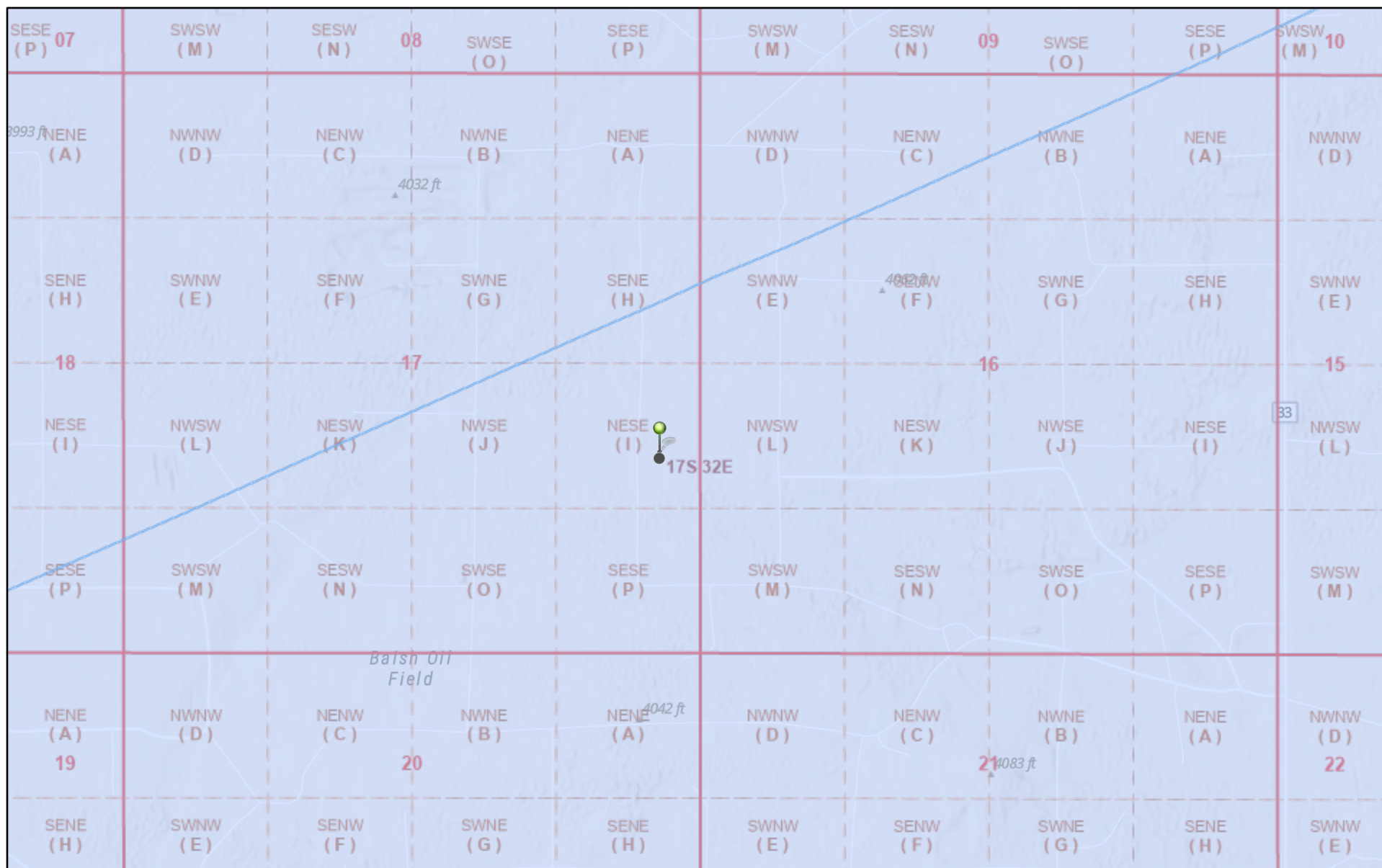
**Bold and highlighted values indicate exceedance of Reclamation Requirements (19.15.29 NMAC).  
Laterally or vertically over excavated and resampled**

Site Assessment and Closure Request  
Maverick Permian, LLC  
Emerald Federal Battery  
NMOCD Incident ID# nAPP2412958102

May 8, 2025

## **ATTACHMENT 1 – SITE CHARACTERIZATION DATA**

## OCD Well Locations



5/16/2025, 9:41:51 AM



Override 1

Karst Occurrence Potential

Low

OSE Streams



PLSS Second Division

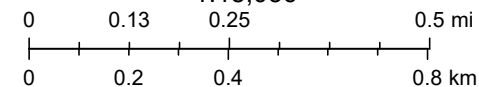


PLSS First Division



PLSS Townships

1:18,056



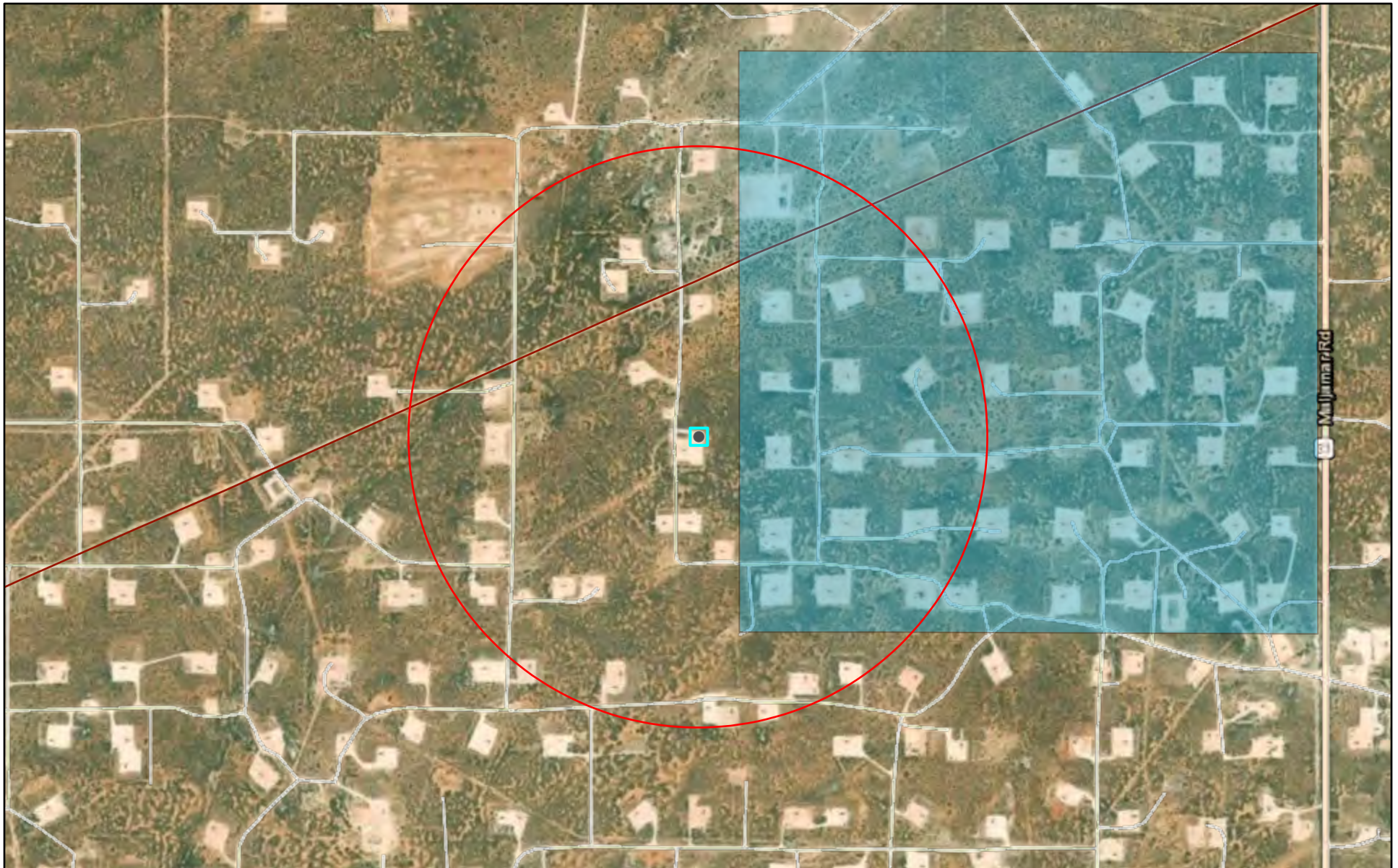
BLM, OCD, New Mexico Tech, Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors,

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. <http://nm-ernrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75>: New Mexico Oil Conservation Division

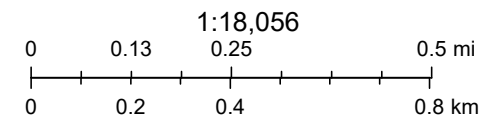


# Maverick Emerald Federal Battery OSE POD Location Map



11/18/2024, 10:16:27 AM

- OSE District Boundary
- New Mexico State Trust Lands
- Both Estates
- NHD Flowlines
- Pipeline

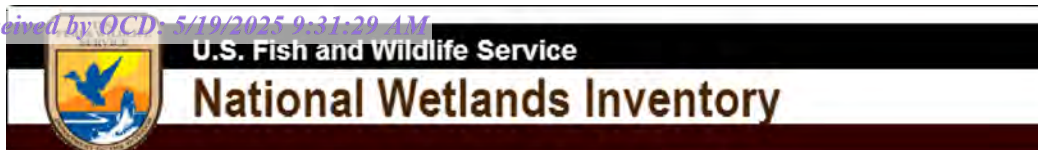


Esri, HERE, IPC, Esri, HERE, Garmin, IPC, Maxar

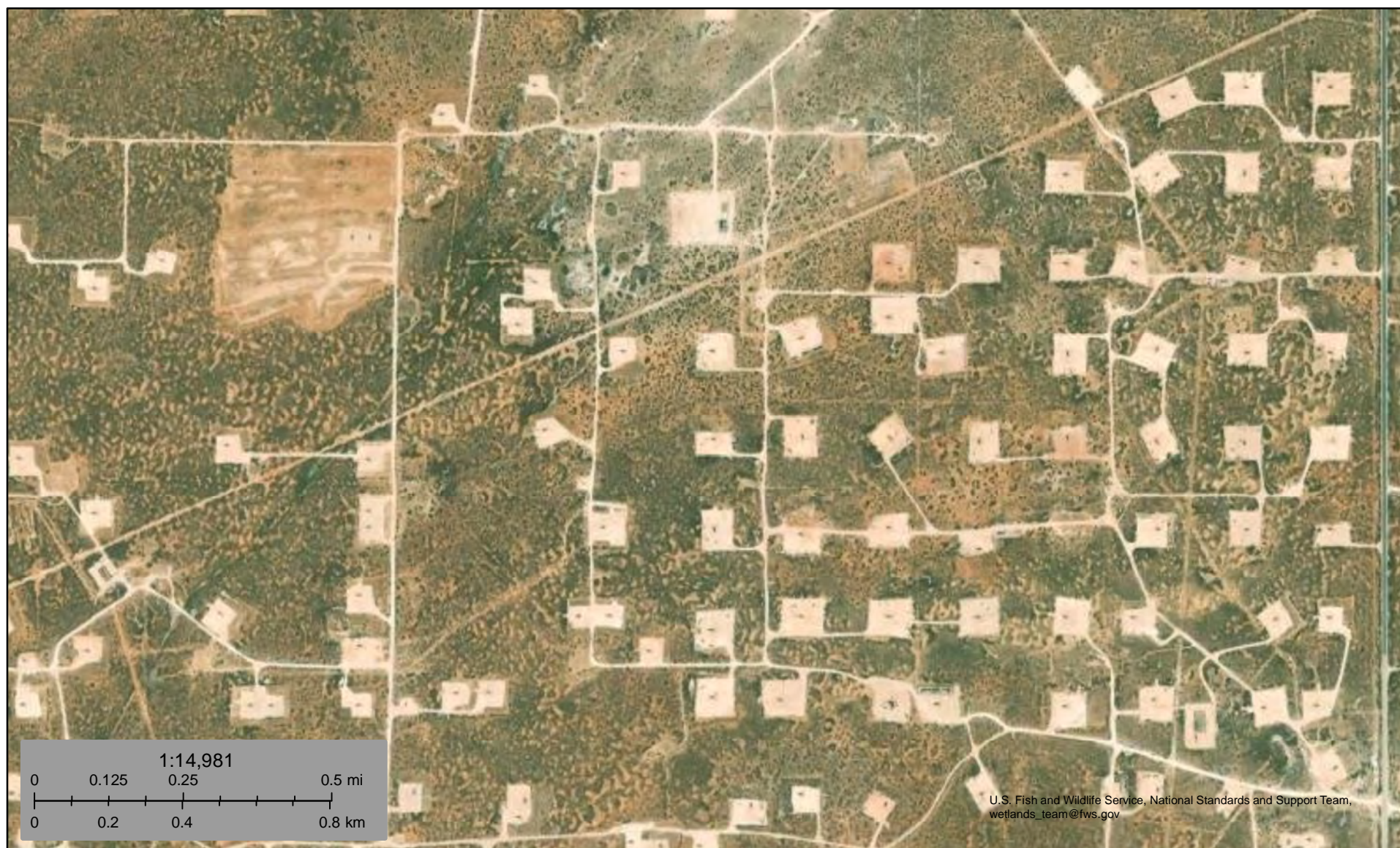
Online web user

This is an unofficial map from the OSE's online application.





## Maverick Emerald Federal Battery



November 18, 2024

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



# National Flood Hazard Layer FIRMette



103°47'11"W 32°50'12"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

103°46'34"W 32°49'41"N

Released to Imaging: 5/30/2025 9:21:08 AM

Basemap Imagery Source: USGS National Map 2023

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/18/2024 at 4:30 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



Soil Map—Lea County, New Mexico  
(Maverick Emerald Federal Battery Soils Map)Natural Resources  
Conservation ServiceWeb Soil Survey  
National Cooperative Soil Survey11/18/2024  
Page 1 of 3

Soil Map—Lea County, New Mexico  
(Maverick Emerald Federal Battery Soils Map)

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lea County, New Mexico

Survey Area Data: Version 21, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KE	Kermit-Wink complex, 0 to 3 percent slopes	2.9	9.8%
KM	Kermit soils and Dune land, 0 to 12 percent slopes	9.5	31.8%
PU	Pyote and Maljamar fine sands	17.4	58.4%
Totals for Area of Interest		29.8	100.0%

Site Assessment and Closure Request  
Maverick Permian, LLC  
Emerald Federal Battery  
NMOCD Incident ID# nAPP2412958102

May 8, 2025

## ATTACHMENT 2 – LABORATORY ANALYTICAL DATA





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

December 12, 2024

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/06/24 14:16.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H - 1 ( 0-1' ) (H247435-01)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 88.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.7 % 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

**Analytical Results For:**

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

Received: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H - 2 ( 0-1' ) (H247435-02)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 84.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H - 3 ( 0-1' ) (H247435-03)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 85.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.0 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H - 4 ( 0-1' ) (H247435-04)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 88.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.0 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H - 5 ( 0-1' ) (H247435-05)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 82.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.7 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/06/2024	Sampling Date:	12/06/2024
Reported:	12/12/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Tamara Oldaker
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: H - 6 ( 0-1' ) (H247435-06)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 87.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.1 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: H - 7 ( 0-1' ) (H247435-07)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 85.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.5 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 1 ( 0-1' ) (H247435-08)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1600	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	2430	50.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	970	50.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 137 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 1 ( 1-2' ) (H247435-09)**

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	12/09/2024	ND	2.02	101	2.00	6.50	
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58	
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55	
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31	
Total BTEX	<0.300	0.300	12/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	20.6	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 2 ( 0-1' ) (H247435-10)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 3 ( 0-1' ) (H247435-11)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	218	109	200	6.60	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	198	99.2	200	5.31	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 90.8 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 3 ( 1-2' ) (H247435-12)**

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	12/09/2024	ND	2.02	101	2.00	6.50		
Toluene*	<0.050	0.050	12/09/2024	ND	2.01	101	2.00	4.58		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.02	101	2.00	3.55		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.03	100	6.00	3.31		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 78.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.2 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 4 ( 0-1' ) (H247435-13)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16		
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38		
Total BTEX	<0.300	0.300	12/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 82.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.6 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 4 ( 1-2' ) (H247435-14)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16		
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 83.0 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 5 ( 0-1' ) (H247435-15)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16		
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 81.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.3 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 5 ( 1-2' ) (H247435-16)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16		
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 78.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.4 % 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: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 6 ( 0-1' ) (H247435-17)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/09/2024	ND	2.23	112	2.00	3.16		
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 82.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 6 ( 1-2' ) (H247435-18)**

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	12/09/2024	ND	2.23	112	2.00	3.16		
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	<10.0	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 81.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/06/2024  
 Reported: 12/12/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/06/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: AH - 2 ( 1-2' ) (H247435-19)**

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	12/09/2024	ND	2.23	112	2.00	3.16		
Toluene*	<0.050	0.050	12/09/2024	ND	2.15	107	2.00	3.86		
Ethylbenzene*	<0.050	0.050	12/09/2024	ND	2.17	109	2.00	5.20		
Total Xylenes*	<0.150	0.150	12/09/2024	ND	6.50	108	6.00	5.38		
Total BTEX	<0.300	0.300	12/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	12/09/2024	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2024	ND	217	109	200	1.35	
DRO >C10-C28*	24.2	10.0	12/09/2024	ND	210	105	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	12/09/2024	ND					

Surrogate: 1-Chlorooctane 83.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager

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### Notes and Definitions

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

---

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

---

Celey D. Keene, Lab Director/Quality Manager



901 W Wall Street, Ste 100  
Midland, Texas 79701  
Tel (432) 682-4559  
Fax (432) 682-3945

Released to Imaging: 5/30/2025 9:21:08 AM



## Analysis Request of Chain of Custody Record

Page 2 of



## Tetra Tech, Inc.

901 W Wall Street, Ste 100  
Midland, Texas 79701  
Tel (432) 682-4556  
Fax (432) 682-3946

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

Emerald Federal Battery

281-755-8965

Project Location:  
(county, state)

Lea County, NM

Project #:

[chuck.terhune@tetratech.com](mailto:chuck.terhune@tetratech.com)

212C-MD-03725

Invoice to:

Attn: Chuck Terhune

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

Include : Chris Straub [Chris.Straub@tetratech.com](mailto:Chris.Straub@tetratech.com) Jorge Fernandez [jorge.fernandez@tetratech.com](mailto:jorge.fernandez@tetratech.com)

LAB #

LAB USE  
(ONLY)

SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS		FILTERED (Y/N)	
YEAR: 2024	DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE				

11	AH-3 (0-1')	12/6/2024	1100	X				X			
12	AH-3 (1-2')	12/6/2024	1105	X				X			
13	AH-4 (0-1')	12/6/2024	1110	X				X			
14	AH-4 (1-2')	12/6/2024	1115	X				X			
15	AH-5 (0-1')	12/6/2024	1120	X				X			
16	AH-5 (1-2')	12/6/2024	1125	X				X			
17	AH-6 (0-1')	12/6/2024	1130	X				X			
18	AH-6 (1-2')	12/6/2024	1135	X				X			
19	AH-2 (1-2')	12/6/2024	1045	X				X			

Relinquished by: *[Signature]* Date: 12-6-24 Time: 1417Relinquished by: *[Signature]* Date: 12-6-24 Time: 1416Relinquished by: *[Signature]* Date: 12-6-24 Time: 1416Received by: *[Signature]* Date: 12-6-24 Time: 1416Received by: *[Signature]* Date: 12-6-24 Time: 1416ANALYSIS 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

Sample Temperature

☐ RUSH: Same Day 24 hr 48 hr 72 hr☐ Rush Charges Authorized☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #

ORIGINAL COPY





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

---

December 18, 2024

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/12/24 15:20.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". 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:	12/12/2024	Sampling Date:	12/12/2024
Reported:	12/18/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 5 (H247544-01)**

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	12/14/2024	ND	2.27	114	2.00	6.60		
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9		
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8		
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4		
Total BTX	<0.300	0.300	12/14/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 80.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.4 % 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: 12/12/2024  
 Reported: 12/18/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/12/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 7 (H247544-02)**

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	12/14/2024	ND	2.27	114	2.00	6.60	
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9	
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8	
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4	
Total BTX	<0.300	0.300	12/14/2024	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 12/12/2024  
 Reported: 12/18/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/12/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 21 ( 2.0' ) (H247544-03)**

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	12/14/2024	ND	2.27	114	2.00	6.60		
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9		
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8		
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4		
Total BTEX	<0.300	0.300	12/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 82.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.8 % 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: 12/12/2024  
 Reported: 12/18/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/12/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 22 ( 2.0' ) (H247544-04)**

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	12/14/2024	ND	2.27	114	2.00	6.60		
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9		
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8		
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4		
Total BTEX	<0.300	0.300	12/14/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 83.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.2 % 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: 12/12/2024  
 Reported: 12/18/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/12/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 23 ( 2.0' ) (H247544-05)**

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	12/14/2024	ND	2.27	114	2.00	6.60		
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9		
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8		
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4		
Total BTEX	<0.300	0.300	12/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 88.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/12/2024  
 Reported: 12/18/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/12/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 18 ( 2.0' ) (H247544-06)**

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	12/14/2024	ND	2.27	114	2.00	6.60		
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9		
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8		
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4		
Total BTEX	<0.300	0.300	12/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 86.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/12/2024  
 Reported: 12/18/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/12/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 33 ( 2.0' ) (H247544-07)**

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	12/14/2024	ND	2.27	114	2.00	6.60		
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9		
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8		
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4		
Total BTEX	<0.300	0.300	12/14/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 12/12/2024  
 Reported: 12/18/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/12/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 34 ( 2.0' ) (H247544-08)**

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	12/14/2024	ND	2.27	114	2.00	6.60		
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9		
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8		
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4		
Total BTEX	<0.300	0.300	12/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 89.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.6 % 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: 12/12/2024  
 Reported: 12/18/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/12/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 35 ( 2.0' ) (H247544-09)**

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	12/14/2024	ND	2.27	114	2.00	6.60		
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9		
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8		
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4		
Total BTEX	<0.300	0.300	12/14/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 91.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.3 % 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: 12/12/2024  
 Reported: 12/18/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/12/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 32 ( 2.0' ) (H247544-10)**

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	12/14/2024	ND	2.27	114	2.00	6.60	
Toluene*	<0.050	0.050	12/14/2024	ND	2.29	114	2.00	10.9	
Ethylbenzene*	<0.050	0.050	12/14/2024	ND	2.34	117	2.00	11.8	
Total Xylenes*	<0.150	0.150	12/14/2024	ND	7.01	117	6.00	12.4	
Total BTEX	<0.300	0.300	12/14/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/17/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2024	ND	198	99.0	200	2.62	
DRO >C10-C28*	<10.0	10.0	12/13/2024	ND	174	86.8	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	12/13/2024	ND					

Surrogate: 1-Chlorooctane 92.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.2 % 49.1-148

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**Notes and Definitions**

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

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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: Emerald Federal Battery

281-755-8965

Project Location: Lea County, NM

Project #:

[chuck.terhune@tetratech.com](mailto:chuck.terhune@tetratech.com)

Invoice to: Attn: Chuck Terhune

Receiving Laboratory: Cardinal Labs

Sampler Signature: Jorge Fernandez

Jorge Fernandez

Comments:

Include : Chris Straub [Chris.Straub@tetratech.com](mailto:Chris.Straub@tetratech.com) Jorge Fernandez [jorge.fernandez@tetratech.com](mailto:jorge.fernandez@tetratech.com)

LAB # 110473414  
(LAB USE ONLY)

		SAMPLING		MATRIX				PRESERVATIVE METHOD				# CONTAINERS		
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE						
1	SW-5	12/12/2024	1200	X					X					X
2	SW-7	12/12/2024	1205	X					X					X
3	BH-21 (2.0')	12/12/2024	1210	X					X					X
4	BH-22 (2.0')	12/12/2024	1215	X					X					X
5	BH-23 (2.0')	12/12/2024	1226	X					X					X
6	BH-18 (2.0')	12/12/2024	1225	X					X					X
7	BH-33 (2.0')	12/12/2024	1230	X					X					X
8	BH-34 (2.0')	12/12/2024	1235	X					X					X
9	BH-35 (2.0')	12/12/2024	1240	X					X					X
10	BH-32 (2.0')	12/12/2024	1245	X					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

Relinquished by: Date: 12-12-24 Time: 1500

Relinquished by: Date: 12-12-24 Time: 1500

Relinquished by: Date: 12-12-24 Time: 1500

Relinquished by: Date: 12-12-24 Time: 1500

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

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December 20, 2024

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/16/24 16:05.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and 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:	12/16/2024	Sampling Date:	12/16/2024
Reported:	12/20/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 6 (H247592-01)**

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	12/17/2024	ND	2.00	100	2.00	1.90		
Toluene*	<0.050	0.050	12/17/2024	ND	2.00	100	2.00	1.91		
Ethylbenzene*	<0.050	0.050	12/17/2024	ND	1.99	99.7	2.00	1.48		
Total Xylenes*	<0.150	0.150	12/17/2024	ND	6.01	100	6.00	1.48		
Total BTX	<0.300	0.300	12/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	12/18/2024	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	12/17/2024	ND	205	102	200	0.911	
DRO >C10-C28*	<10.0	10.0	12/17/2024	ND	202	101	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 100 % 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: 12/16/2024  
 Reported: 12/20/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 8 (H247592-02)**

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	12/17/2024	ND	2.00	100	2.00	1.90	
Toluene*	<0.050	0.050	12/17/2024	ND	2.00	100	2.00	1.91	
Ethylbenzene*	<0.050	0.050	12/17/2024	ND	1.99	99.7	2.00	1.48	
Total Xylenes*	<0.150	0.150	12/17/2024	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	12/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	12/18/2024	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	12/17/2024	ND	205	102	200	0.911	
DRO >C10-C28*	<10.0	10.0	12/17/2024	ND	202	101	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 90.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.0 % 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: 12/16/2024  
 Reported: 12/20/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 20 ( 2.0' ) (H247592-03)**

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	12/17/2024	ND	2.00	100	2.00	1.90	
Toluene*	<0.050	0.050	12/17/2024	ND	2.00	100	2.00	1.91	
Ethylbenzene*	<0.050	0.050	12/17/2024	ND	1.99	99.7	2.00	1.48	
Total Xylenes*	<0.150	0.150	12/17/2024	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	12/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	12/18/2024	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	12/17/2024	ND	205	102	200	0.911	
DRO >C10-C28*	35.9	10.0	12/17/2024	ND	202	101	200	2.25	
EXT DRO >C28-C36	10.6	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 97.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/16/2024  
 Reported: 12/20/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 36 ( 2.0' ) (H247592-04)**

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	12/17/2024	ND	2.00	100	2.00	1.90	
Toluene*	<0.050	0.050	12/17/2024	ND	2.00	100	2.00	1.91	
Ethylbenzene*	<0.050	0.050	12/17/2024	ND	1.99	99.7	2.00	1.48	
Total Xylenes*	<0.150	0.150	12/17/2024	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	12/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	12/18/2024	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	12/17/2024	ND	205	102	200	0.911	
DRO >C10-C28*	16.4	10.0	12/17/2024	ND	202	101	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 98.8 % 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: 12/16/2024  
 Reported: 12/20/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 31 ( 2.0' ) (H247592-05)**

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	12/17/2024	ND	2.00	100	2.00	1.90		
Toluene*	<0.050	0.050	12/17/2024	ND	2.00	100	2.00	1.91		
Ethylbenzene*	<0.050	0.050	12/17/2024	ND	1.99	99.7	2.00	1.48		
Total Xylenes*	<0.150	0.150	12/17/2024	ND	6.01	100	6.00	1.48		
Total BTEX	<0.300	0.300	12/17/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	624	16.0	12/18/2024	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	12/17/2024	ND	205	102	200	0.911	
DRO >C10-C28*	16.3	10.0	12/17/2024	ND	202	101	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 90.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.3 % 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: 12/16/2024  
 Reported: 12/20/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 19 ( 2.0' ) (H247592-06)**

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	12/17/2024	ND	2.00	100	2.00	1.90	
Toluene*	<0.050	0.050	12/17/2024	ND	2.00	100	2.00	1.91	
Ethylbenzene*	<0.050	0.050	12/17/2024	ND	1.99	99.7	2.00	1.48	
Total Xylenes*	<0.150	0.150	12/17/2024	ND	6.01	100	6.00	1.48	
Total BTEX	<0.300	0.300	12/17/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	12/18/2024	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	12/17/2024	ND	205	102	200	0.911	
DRO >C10-C28*	23.8	10.0	12/17/2024	ND	202	101	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 79.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.0 % 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: 12/16/2024  
 Reported: 12/20/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 16 ( 2.0' ) (H247592-07)**

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	12/17/2024	ND	2.00	100	2.00	1.90		
Toluene*	<0.050	0.050	12/17/2024	ND	2.00	100	2.00	1.91		
Ethylbenzene*	<0.050	0.050	12/17/2024	ND	1.99	99.7	2.00	1.48		
Total Xylenes*	<0.150	0.150	12/17/2024	ND	6.01	100	6.00	1.48		
Total BTEX	<0.300	0.300	12/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	12/18/2024	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	12/17/2024	ND	205	102	200	0.911	
DRO >C10-C28*	11.0	10.0	12/17/2024	ND	202	101	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 87.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	12/16/2024	Sampling Date:	12/16/2024
Reported:	12/20/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 12 ( 2.0' ) (H247592-08)**

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	12/17/2024	ND	2.00	100	2.00	1.90		
Toluene*	<0.050	0.050	12/17/2024	ND	2.00	100	2.00	1.91		
Ethylbenzene*	<0.050	0.050	12/17/2024	ND	1.99	99.7	2.00	1.48		
Total Xylenes*	<0.150	0.150	12/17/2024	ND	6.01	100	6.00	1.48		
Total BTEx	<0.300	0.300	12/17/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	12/18/2024	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	12/17/2024	ND	205	102	200	0.911	
DRO >C10-C28*	<10.0	10.0	12/17/2024	ND	202	101	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/17/2024	ND					

Surrogate: 1-Chlorooctane 101 % 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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### 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

Page 1 of 1

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

Emerald Federal Battery

281-755-8965

Project Location:  
(county, state)

Lea County, NM

Project #:

[chuck.terhune@tetratech.com](mailto:chuck.terhune@tetratech.com)

Invoice to:

212C-MD-03725

Attn: Chuck Terhune

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

 Include : Chris Straub [Chris.Straub@tetratech.com](mailto:Chris.Straub@tetratech.com) Jorge Fernandez [jorge.fernandez@tetratech.com](mailto:jorge.fernandez@tetratech.com)

LAB #

LAB USE ONLY

		SAMPLING		MATRIX				PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE			
SW-6		12/16/2024	12:00	X				X			X
SW-8		12/16/2024	12:05		X			X			X
BH-20 (2.0')		12/16/2024	12:16		X			X			X
BH-36 (2.0')		12/16/2024	12:15		X			X			X
BH-31 (2.0')		12/16/2024	12:20		X			X			X
BH-19 (2.0')		12/16/2024	12:36		X			X			X
BH-16 (2.0')		12/16/2024	12:35		X			X			X
BH-12 (2.0')		12/16/2024	12:40		X			X			X
BH-13 (2.0')		12/16/2024	12:45		X			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

Inquired by:

Date:

Time:

Inquired by:

Date:

Time:

Inquired by:

Date:

Time:

Received by:

Date:

Time:

Received by:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



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---

December 27, 2024

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/19/24 13:50.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 3 ( 2.0' ) (H247693-01)**

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	12/21/2024	ND	2.00	100	2.00	1.26		
Toluene*	<0.050	0.050	12/21/2024	ND	2.08	104	2.00	1.57		
Ethylbenzene*	<0.050	0.050	12/21/2024	ND	2.01	100	2.00	1.71		
Total Xylenes*	<0.150	0.150	12/21/2024	ND	5.89	98.2	6.00	1.90		
Total BTEX	<0.300	0.300	12/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/20/2024	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	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	<10.0	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 112 % 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 7 ( 2.0' ) (H247693-02)**

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	12/21/2024	ND	2.00	100	2.00	1.26		
Toluene*	<0.050	0.050	12/21/2024	ND	2.08	104	2.00	1.57		
Ethylbenzene*	<0.050	0.050	12/21/2024	ND	2.01	100	2.00	1.71		
Total Xylenes*	<0.150	0.150	12/21/2024	ND	5.89	98.2	6.00	1.90		
Total BTEX	<0.300	0.300	12/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	12/20/2024	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	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	39.8	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 92.7 % 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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**Analytical Results For:**

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

Received: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 9 ( 2.0' ) (H247693-03)**

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	12/21/2024	ND	2.00	100	2.00	1.26		
Toluene*	<0.050	0.050	12/21/2024	ND	2.08	104	2.00	1.57		
Ethylbenzene*	<0.050	0.050	12/21/2024	ND	2.01	100	2.00	1.71		
Total Xylenes*	<0.150	0.150	12/21/2024	ND	5.89	98.2	6.00	1.90		
Total BTEX	<0.300	0.300	12/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/20/2024	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	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	29.4	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 96.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 2 ( 2.0' ) (H247693-04)**

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	12/21/2024	ND	2.00	100	2.00	1.26		
Toluene*	<0.050	0.050	12/21/2024	ND	2.08	104	2.00	1.57		
Ethylbenzene*	<0.050	0.050	12/21/2024	ND	2.01	100	2.00	1.71		
Total Xylenes*	<0.150	0.150	12/21/2024	ND	5.89	98.2	6.00	1.90		
Total BTEX	<0.300	0.300	12/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/20/2024	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	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	<10.0	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 110 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 6 ( 2.0' ) (H247693-05)**

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	12/21/2024	ND	2.00	100	2.00	1.26		
Toluene*	<0.050	0.050	12/21/2024	ND	2.08	104	2.00	1.57		
Ethylbenzene*	<0.050	0.050	12/21/2024	ND	2.01	100	2.00	1.71		
Total Xylenes*	<0.150	0.150	12/21/2024	ND	5.89	98.2	6.00	1.90		
Total BTEX	<0.300	0.300	12/21/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/20/2024	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	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	12.2	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 114 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 13 ( 2.0' ) (H247693-06)**

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	12/22/2024	ND	1.96	97.9	2.00	6.95		
Toluene*	<0.050	0.050	12/22/2024	ND	2.05	102	2.00	6.98		
Ethylbenzene*	<0.050	0.050	12/22/2024	ND	1.98	99.2	2.00	6.43		
Total Xylenes*	<0.150	0.150	12/22/2024	ND	5.82	97.0	6.00	6.21		
Total BTEX	<0.300	0.300	12/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/20/2024	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	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	<10.0	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 105 % 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 37 ( 2.0' ) (H247693-07)**

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	12/22/2024	ND	1.96	97.9	2.00	6.95		
Toluene*	<0.050	0.050	12/22/2024	ND	2.05	102	2.00	6.98		
Ethylbenzene*	<0.050	0.050	12/22/2024	ND	1.98	99.2	2.00	6.43		
Total Xylenes*	<0.150	0.150	12/22/2024	ND	5.82	97.0	6.00	6.21		
Total BTEX	<0.300	0.300	12/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/20/2024	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	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	22.7	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 1 ( 2.0' ) (H247693-08)**

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	12/22/2024	ND	1.96	97.9	2.00	6.95		
Toluene*	<0.050	0.050	12/22/2024	ND	2.05	102	2.00	6.98		
Ethylbenzene*	<0.050	0.050	12/22/2024	ND	1.98	99.2	2.00	6.43		
Total Xylenes*	<0.150	0.150	12/22/2024	ND	5.82	97.0	6.00	6.21		
Total BTEX	<0.300	0.300	12/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	12/20/2024	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	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	22.2	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 104 % 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 5 ( 2.0' ) (H247693-09)**

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	12/22/2024	ND	1.96	97.9	2.00	6.95		
Toluene*	<0.050	0.050	12/22/2024	ND	2.05	102	2.00	6.98		
Ethylbenzene*	<0.050	0.050	12/22/2024	ND	1.98	99.2	2.00	6.43		
Total Xylenes*	<0.150	0.150	12/22/2024	ND	5.82	97.0	6.00	6.21		
Total BTEX	<0.300	0.300	12/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/20/2024	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	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	<10.0	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 95.1 % 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 15 ( 2.0' ) (H247693-10)**

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	12/22/2024	ND	1.96	97.9	2.00	6.95		
Toluene*	<0.050	0.050	12/22/2024	ND	2.05	102	2.00	6.98		
Ethylbenzene*	<0.050	0.050	12/22/2024	ND	1.98	99.2	2.00	6.43		
Total Xylenes*	<0.150	0.150	12/22/2024	ND	5.82	97.0	6.00	6.21		
Total BTEX	<0.300	0.300	12/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 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	80.0	16.0	12/20/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	25.9	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 103 % 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 38 ( 2.0' ) (H247693-11)**

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	12/22/2024	ND	1.96	97.9	2.00	6.95		
Toluene*	<0.050	0.050	12/22/2024	ND	2.05	102	2.00	6.98		
Ethylbenzene*	<0.050	0.050	12/22/2024	ND	1.98	99.2	2.00	6.43		
Total Xylenes*	<0.150	0.150	12/22/2024	ND	5.82	97.0	6.00	6.21		
Total BTX	<0.300	0.300	12/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 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	112	16.0	12/20/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	10.6	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 101 % 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 29 ( 2.0' ) (H247693-12)**

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	12/22/2024	ND	1.96	97.9	2.00	6.95		
Toluene*	<0.050	0.050	12/22/2024	ND	2.05	102	2.00	6.98		
Ethylbenzene*	<0.050	0.050	12/22/2024	ND	1.98	99.2	2.00	6.43		
Total Xylenes*	<0.150	0.150	12/22/2024	ND	5.82	97.0	6.00	6.21		
Total BTEX	<0.300	0.300	12/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/20/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	<10.0	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 103 % 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 10 ( 2.0' ) (H247693-13)**

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	12/22/2024	ND	1.96	97.9	2.00	6.95		
Toluene*	<0.050	0.050	12/22/2024	ND	2.05	102	2.00	6.98		
Ethylbenzene*	<0.050	0.050	12/22/2024	ND	1.98	99.2	2.00	6.43		
Total Xylenes*	<0.150	0.150	12/22/2024	ND	5.82	97.0	6.00	6.21		
Total BTX	<0.300	0.300	12/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/20/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	<10.0	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 102 % 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: 12/19/2024  
 Reported: 12/27/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/19/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 30 ( 2.0' ) (H247693-14)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/22/2024	ND	1.96	97.9	2.00	6.95		
Toluene*	<0.050	0.050	12/22/2024	ND	2.05	102	2.00	6.98		
Ethylbenzene*	<0.050	0.050	12/22/2024	ND	1.98	99.2	2.00	6.43		
Total Xylenes*	<0.150	0.150	12/22/2024	ND	5.82	97.0	6.00	6.21		
Total BTEX	<0.300	0.300	12/22/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 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	80.0	16.0	12/20/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/20/2024	ND	207	104	200	6.11	
DRO >C10-C28*	18.4	10.0	12/20/2024	ND	195	97.5	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	12/20/2024	ND					

Surrogate: 1-Chlorooctane 94.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

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

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

---

Celey D. Keene, Lab Director/Quality Manager

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

**Chuck Terhune**

[chuck.terhune@tetrattech.com](mailto:chuck.terhune@tetrattech.com)

212C-MD-03725

Attn: Chuck Terhune

Jorge Fernandez

Comments:

**Include :** Chris Straub [Chris.Straub@tetratech.com](mailto:Chris.Straub@tetratech.com) Jorge.Fernandez@tetratech.com

LAB USE ONLY

[illegible]

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

Page 17 of 18

Disinquinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Disinquinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

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

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

המחיר

REMARKS: Standard TAT

2  
1  
4

**RUSH:** Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

#### ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Received by OCD: 5/19/2025 9:31:29 AM

Released to Imaging: 5/30/2025 9:21:08 AM



### 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

Page 4 of 4

Page 18 of 18

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December 30, 2024

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/20/24 14:14.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "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:	12/20/2024	Sampling Date:	12/20/2024
Reported:	12/30/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 24 (H247736-01)**

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	12/26/2024	ND	1.82	91.1	2.00	0.743		
Toluene*	<0.050	0.050	12/26/2024	ND	1.82	90.8	2.00	0.110		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	1.90	94.8	2.00	2.38		
Total Xylenes*	0.266	0.150	12/26/2024	ND	5.67	94.4	6.00	4.33		
Total BTEX	0.307	0.300	12/26/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>5440</b>	16.0	12/27/2024	ND	416	104	400	7.41		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<100	100	12/26/2024	ND	208	104	200	0.238	
DRO >C10-C28*	5050	100	12/26/2024	ND	190	94.9	200	0.158	
EXT DRO >C28-C36	1110	100	12/26/2024	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 160 % 49.1-148

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\*=Accredited Analyte

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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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 13 (H247736-02)**

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	12/26/2024	ND	1.82	91.1	2.00	0.743		
Toluene*	<0.050	0.050	12/26/2024	ND	1.82	90.8	2.00	0.110		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	1.90	94.8	2.00	2.38		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	5.67	94.4	6.00	4.33		
Total BTEX	<0.300	0.300	12/26/2024	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	10300	16.0	12/27/2024	ND	432	108	400	0.00	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/27/2024	ND	208	104	200	0.238	
DRO >C10-C28*	126	10.0	12/27/2024	ND	190	94.9	200	0.158	
EXT DRO >C28-C36	23.1	10.0	12/27/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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\*=Accredited Analyte

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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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 26 (H247736-03)**

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	12/26/2024	ND	1.82	91.1	2.00	0.743		
Toluene*	<0.050	0.050	12/26/2024	ND	1.82	90.8	2.00	0.110		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	1.90	94.8	2.00	2.38		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	5.67	94.4	6.00	4.33		
Total BTEX	<0.300	0.300	12/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	880	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/27/2024	ND	208	104	200	0.238	
DRO >C10-C28*	33.4	10.0	12/27/2024	ND	190	94.9	200	0.158	
EXT DRO >C28-C36	<10.0	10.0	12/27/2024	ND					

Surrogate: 1-Chlorooctane 92.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.2 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 27 (H247736-04)**

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	12/26/2024	ND	1.82	91.1	2.00	0.743		
Toluene*	<0.050	0.050	12/26/2024	ND	1.82	90.8	2.00	0.110		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	1.90	94.8	2.00	2.38		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	5.67	94.4	6.00	4.33		
Total BTEX	<0.300	0.300	12/26/2024	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	416	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	208	104	200	0.238	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	190	94.9	200	0.158	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 91.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.1 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 22 (H247736-05)**

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	12/26/2024	ND	1.82	91.1	2.00	0.743		
Toluene*	<0.050	0.050	12/26/2024	ND	1.82	90.8	2.00	0.110		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	1.90	94.8	2.00	2.38		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	5.67	94.4	6.00	4.33		
Total BTEX	<0.300	0.300	12/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	14.8	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	1850	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	483	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 85.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.3 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 15 (H247736-06)**

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	12/26/2024	ND	1.82	91.1	2.00	0.743		
Toluene*	<0.050	0.050	12/26/2024	ND	1.82	90.8	2.00	0.110		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	1.90	94.8	2.00	2.38		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	5.67	94.4	6.00	4.33		
Total BTEX	<0.300	0.300	12/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 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	11600	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/27/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	70.3	10.0	12/27/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	17.4	10.0	12/27/2024	ND					

Surrogate: 1-Chlorooctane 109 % 48.2-134

Surrogate: 1-Chlorooctadecane 116 % 49.1-148

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\*=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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 23 (H247736-07)**

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	12/26/2024	ND	1.82	91.1	2.00	0.743		
Toluene*	<0.050	0.050	12/26/2024	ND	1.82	90.8	2.00	0.110		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	1.90	94.8	2.00	2.38		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	5.67	94.4	6.00	4.33		
Total BTEX	<0.300	0.300	12/26/2024	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	720	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/27/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	<10.0	10.0	12/27/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	12/27/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 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:	12/20/2024	Sampling Date:	12/20/2024
Reported:	12/30/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 14 (H247736-08)**

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	12/26/2024	ND	1.82	91.1	2.00	0.743		
Toluene*	<0.050	0.050	12/26/2024	ND	1.82	90.8	2.00	0.110		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	1.90	94.8	2.00	2.38		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	5.67	94.4	6.00	4.33		
Total BTEX	<0.300	0.300	12/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	13300	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/27/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	69.9	10.0	12/27/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	11.5	10.0	12/27/2024	ND					

Surrogate: 1-Chlorooctane 91.1 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 12 (H247736-09)**

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	12/26/2024	ND	1.82	91.1	2.00	0.743		
Toluene*	<0.050	0.050	12/26/2024	ND	1.82	90.8	2.00	0.110		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	1.90	94.8	2.00	2.38		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	5.67	94.4	6.00	4.33		
Total BTEX	<0.300	0.300	12/26/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1300	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	2210	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	711	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 87.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 1 (H247736-10)**

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	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEx	<0.300	0.300	12/26/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 86.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.8 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 2 (H247736-11)**

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	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEx	<0.300	0.300	12/26/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 94.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.0 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 11 (H247736-12)**

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	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEX	<0.300	0.300	12/26/2024	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	16.0	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 86.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.5 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 3 (H247736-13)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/26/2024	ND	2.16	108	2.00	2.32	
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25	
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43	
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06	
Total BTEX	<0.300	0.300	12/26/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/27/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 78.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.1 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 4 (H247736-14)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEX	<0.300	0.300	12/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 87.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.5 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 10 (H247736-15)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEX	<0.300	0.300	12/26/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 84.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.6 % 49.1-148

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\*=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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 9 (H247736-16)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEX	<0.300	0.300	12/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	<10.0	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 90.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.0 % 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:	12/20/2024	Sampling Date:	12/20/2024
Reported:	12/30/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 63 ( .25' ) (H247736-17)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	0.197	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	0.561	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEX	0.772	0.300	12/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 120 % 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	2360	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	62.0	50.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	9450	50.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	2550	50.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 287 % 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:	12/20/2024	Sampling Date:	12/20/2024
Reported:	12/30/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 62 ( .25' ) (H247736-18)**

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	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEX	<0.300	0.300	12/26/2024	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	208	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	243	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	53.1	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 82.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.5 % 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:	12/20/2024	Sampling Date:	12/20/2024
Reported:	12/30/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 28 ( .25' ) (H247736-19)**

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	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEX	<0.300	0.300	12/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	5360	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	174	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	60.3	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 82.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.8 % 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:	12/20/2024	Sampling Date:	12/20/2024
Reported:	12/30/2024	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 27 ( .25' ) (H247736-20)**

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	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEx	<0.300	0.300	12/26/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	37200	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	2270	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	633	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 89.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 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: 12/20/2024  
 Reported: 12/30/2024  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 12/20/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 24 ( .25' ) (H247736-21)**

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	12/26/2024	ND	2.16	108	2.00	2.32		
Toluene*	<0.050	0.050	12/26/2024	ND	2.08	104	2.00	3.25		
Ethylbenzene*	<0.050	0.050	12/26/2024	ND	2.09	105	2.00	4.43		
Total Xylenes*	<0.150	0.150	12/26/2024	ND	6.32	105	6.00	5.06		
Total BTEX	<0.300	0.300	12/26/2024	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	23200	16.0	12/27/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/26/2024	ND	189	94.3	200	1.25	
DRO >C10-C28*	44.1	10.0	12/26/2024	ND	197	98.6	200	1.81	
EXT DRO >C28-C36	<10.0	10.0	12/26/2024	ND					

Surrogate: 1-Chlorooctane 80.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.4 % 49.1-148

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

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### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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", is written over a horizontal line.

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) 682-4556  
Fax (432) 682-3946

Client Name:

Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name:

Emerald Federal Battery

281-755-8965

Project Location:

Lea County, NM

Project #:

chuck.terhune@tetratech.com

212C-MD-03725

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

LAB #  
LAB USE ONLY

		SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>		
SW-25	12/20/2024	1000	X	X	X	X	X		
SW-24	12/20/2024	1005	X	X	X	X	X		
SW-13	12/20/2024	1010	X	X	X	X	X		
SW-26	12/20/2024	1015	X	X	X	X	X		
SW-27	12/20/2024	1020	X	X	X	X	X		
SW-22	12/20/2024	1025	X	X	X	X	X		
SW-15	12/20/2024	1030	X	X	X	X	X		
SW-23	12/20/2024	1035	X	X	X	X	X		
SW-14	12/20/2024	1040	X	X	X	X	X		
SW-12	12/20/2024	1045	X	X	X	X	X		

Inquired by: [Signature] Date: 12-20-24 Time: 1412

Inquired by: [Signature] Date: 12-20-24 Time: 1412

Inquired by: [Signature] Date: 12-20-24 Time: 1412

Received by: [Signature] Date: 12-20-24 Time: 1414

Received by: [Signature] Date: 12-20-24 Time: 1414

Received by: [Signature] Date: 12-20-24 Time: 1414

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

Sample Temperature

- ☐ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



Analysis Request of Chain of Custody Record



**Tetra Tech, Inc.**

901 W Wall Street, Ste 100  
Midland, Texas 79701  
Tel (432) 682-4559  
Fax (432) 682-3945

Client Name: Maverick Natural Resources

Site Manager: Chuck Terhune

Project Name: Emerald Federal Battery

281-755-8965

Project Location: Lea County, NM

Project #:

[chuck.terhune@tetratech.com](mailto:chuck.terhune@tetratech.com)

Invoice to:

212C-MD-03725

Attn: Chuck Terhune

Receiving Laboratory:

Sampler Signature:

Cardinal Labs

Jorge Fernandez

Comments:

Include : Chris Straub [Chris.Straub@tetratech.com](mailto:Chris.Straub@tetratech.com) Jorge Fernandez [jorge.fernandez@tetratech.com](mailto:jorge.fernandez@tetratech.com)

LAB #

(LAB USE ONLY)

		SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE				
10	SW-1	12/20/2024	1045	X	X		X					X
11	SW-2	12/20/2024	1050	X	X		X					X
12	SW-11	12/20/2024	1055	X	X		X					X
13	SW-3	12/20/2024	1105	X	X		X					X
14	SW-4	12/20/2024	1110	X	X		X					X
15	SW-10	12/20/2024	1115	X	X		X					X
16	SW-9	12/20/2024	1120	X	X		X					X
17	BH-63 (.25')	12/20/2024	1125	X	X		X					X
18	BH-62 (.25')	12/20/2024	1130	X	X		X					X
19	BH-28 (.25')	12/20/2024	1130	X	X		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		

LAB USE ONLY

REMARKS:

Standard TAT

☐ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

Sample Temperature  
80.0°C  
8.3°C / 14.5

Inquired by: Date: Time:

Inquired by: Date: Time:

Inquired by: Date: Time:

Received by: Date: Time:

Received by: Date: Time:

Received by: Date: Time:

Received by: Date: Time:

Received by: Date: Time:

Received by: Date: Time:

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:





**Tetra Tech, Inc.**

Midland, Texas 79701  
Tel (432) 682-4559  
Fax (432) 682-3946

Page 3 of 3

Page 26 of 26

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

January 09, 2025

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/06/25 14:26.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, 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:	01/06/2025	Sampling Date:	01/06/2025
Reported:	01/09/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 40 (2.0') (H250036-01)**

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	01/06/2025	ND	2.06	103	2.00	8.13	
Toluene*	<0.050	0.050	01/06/2025	ND	2.25	112	2.00	12.2	
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	2.39	120	2.00	13.7	
Total Xylenes*	<0.150	0.150	01/06/2025	ND	7.27	121	6.00	11.7	
Total BTEX	<0.300	0.300	01/06/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/07/2025	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2025	ND	207	103	200	0.460	
DRO >C10-C28*	13.0	10.0	01/07/2025	ND	190	95.1	200	0.885	
EXT DRO >C28-C36	<10.0	10.0	01/07/2025	ND					

Surrogate: 1-Chlorooctane 99.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	01/06/2025	Sampling Date:	01/06/2025
Reported:	01/09/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 51 (2.0') (H250036-02)**

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	01/06/2025	ND	2.06	103	2.00	8.13		
Toluene*	<0.050	0.050	01/06/2025	ND	2.25	112	2.00	12.2		
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	2.39	120	2.00	13.7		
Total Xylenes*	<0.150	0.150	01/06/2025	ND	7.27	121	6.00	11.7		
Total BTEX	<0.300	0.300	01/06/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 120 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/07/2025	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/07/2025	ND	207	103	200	0.460	
DRO >C10-C28*	12.1	10.0	01/07/2025	ND	190	95.1	200	0.885	
EXT DRO >C28-C36	<10.0	10.0	01/07/2025	ND					

Surrogate: 1-Chlorooctane 99.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.9 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 01/06/2025  
 Reported: 01/09/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/06/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 26 (2.0') (H250036-03)**

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	01/06/2025	ND	2.06	103	2.00	8.13	
Toluene*	<0.050	0.050	01/06/2025	ND	2.25	112	2.00	12.2	
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	2.39	120	2.00	13.7	
Total Xylenes*	<0.150	0.150	01/06/2025	ND	7.27	121	6.00	11.7	
Total BTX	<0.300	0.300	01/06/2025	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	<10.0	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 79.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.3 % 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: 01/06/2025  
 Reported: 01/09/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/06/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 39 (2.0') (H250036-04)**

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	01/06/2025	ND	2.06	103	2.00	8.13		
Toluene*	<0.050	0.050	01/06/2025	ND	2.25	112	2.00	12.2		
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	2.39	120	2.00	13.7		
Total Xylenes*	<0.150	0.150	01/06/2025	ND	7.27	121	6.00	11.7		
Total BTEx	<0.300	0.300	01/06/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	26.1	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 77.6 % 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: 01/06/2025  
 Reported: 01/09/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/06/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 31 (2.25') (H250036-05)**

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	01/06/2025	ND	2.06	103	2.00	8.13		
Toluene*	<0.050	0.050	01/06/2025	ND	2.25	112	2.00	12.2		
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	2.39	120	2.00	13.7		
Total Xylenes*	<0.150	0.150	01/06/2025	ND	7.27	121	6.00	11.7		
Total BTEX	<0.300	0.300	01/06/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 120 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	<10.0	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 81.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.8 % 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:	01/06/2025	Sampling Date:	01/06/2025
Reported:	01/09/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 25 (2.0') (H250036-06)**

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	01/06/2025	ND	2.06	103	2.00	8.13		
Toluene*	<0.050	0.050	01/06/2025	ND	2.25	112	2.00	12.2		
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	2.39	120	2.00	13.7		
Total Xylenes*	<0.150	0.150	01/06/2025	ND	7.27	121	6.00	11.7		
Total BTEX	<0.300	0.300	01/06/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	<10.0	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 80.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.8 % 49.1-148

Cardinal Laboratories

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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: 01/06/2025  
 Reported: 01/09/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/06/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: SW - 16 (H250036-07)**

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	01/06/2025	ND	1.77	88.6	2.00	0.301	QR-03
Toluene*	<0.050	0.050	01/06/2025	ND	1.86	92.8	2.00	0.344	QR-03
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	1.80	89.8	2.00	1.26	QM-07, QR-03
Total Xylenes*	<0.150	0.150	01/06/2025	ND	5.26	87.7	6.00	1.97	QM-07, QR-03
Total BTX	<0.300	0.300	01/06/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.4 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	18.3	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 82.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.8 % 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:	01/06/2025	Sampling Date:	01/06/2025
Reported:	01/09/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 29 (H250036-08)**

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	01/06/2025	ND	1.77	88.6	2.00	0.301		
Toluene*	<0.050	0.050	01/06/2025	ND	1.86	92.8	2.00	0.344		
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	1.80	89.8	2.00	1.26		
Total Xylenes*	<0.150	0.150	01/06/2025	ND	5.26	87.7	6.00	1.97		
Total BTEX	<0.300	0.300	01/06/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	<10.0	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 76.5 % 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:	01/06/2025	Sampling Date:	01/06/2025
Reported:	01/09/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 31 (H250036-09)**

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	01/06/2025	ND	1.77	88.6	2.00	0.301		
Toluene*	<0.050	0.050	01/06/2025	ND	1.86	92.8	2.00	0.344		
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	1.80	89.8	2.00	1.26		
Total Xylenes*	<0.150	0.150	01/06/2025	ND	5.26	87.7	6.00	1.97		
Total BTEX	<0.300	0.300	01/06/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1540	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	<10.0	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 81.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.2 % 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:	01/06/2025	Sampling Date:	01/06/2025
Reported:	01/09/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 25 (H250036-10)**

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	01/06/2025	ND	1.77	88.6	2.00	0.301	
Toluene*	<0.050	0.050	01/06/2025	ND	1.86	92.8	2.00	0.344	
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	1.80	89.8	2.00	1.26	
Total Xylenes*	<0.150	0.150	01/06/2025	ND	5.26	87.7	6.00	1.97	
Total BTEX	<0.300	0.300	01/06/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.5 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	<10.0	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.8 % 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:	01/06/2025	Sampling Date:	01/06/2025
Reported:	01/09/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 30 (H250036-11)**

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	01/06/2025	ND	1.77	88.6	2.00	0.301		
Toluene*	<0.050	0.050	01/06/2025	ND	1.86	92.8	2.00	0.344		
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	1.80	89.8	2.00	1.26		
Total Xylenes*	<0.150	0.150	01/06/2025	ND	5.26	87.7	6.00	1.97		
Total BTEX	<0.300	0.300	01/06/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	<10.0	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 74.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.2 % 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:	01/06/2025	Sampling Date:	01/06/2025
Reported:	01/09/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 27 (H250036-12)**

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	01/07/2025	ND	1.77	88.6	2.00	0.301		
Toluene*	<0.050	0.050	01/07/2025	ND	1.86	92.8	2.00	0.344		
Ethylbenzene*	<0.050	0.050	01/07/2025	ND	1.80	89.8	2.00	1.26		
Total Xylenes*	<0.150	0.150	01/07/2025	ND	5.26	87.7	6.00	1.97		
Total BTEX	<0.300	0.300	01/07/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.4 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2080	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	647	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	131	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 78.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.7 % 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:	01/06/2025	Sampling Date:	01/06/2025
Reported:	01/09/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 28 (H250036-13)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/06/2025	ND	1.77	88.6	2.00	0.301	
Toluene*	<0.050	0.050	01/06/2025	ND	1.86	92.8	2.00	0.344	
Ethylbenzene*	<0.050	0.050	01/06/2025	ND	1.80	89.8	2.00	1.26	
Total Xylenes*	<0.150	0.150	01/06/2025	ND	5.26	87.7	6.00	1.97	
Total BTEX	<0.300	0.300	01/06/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	01/07/2025	ND	464	116	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	01/06/2025	ND	175	87.6	200	2.67	
DRO >C10-C28*	<10.0	10.0	01/06/2025	ND	174	87.1	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/06/2025	ND					

Surrogate: 1-Chlorooctane 76.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.0 % 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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

---

Celey D. Keene, Lab Director/Quality Manager





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

☐ Special Report Limits or TRRP Report

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January 13, 2025

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/08/25 13:32.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 21 (H250083-01)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266	
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352	
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257	
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188	
Total BTX	<0.300	0.300	01/08/2025	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	01/09/2025	ND	480	120	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 91.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 20 (H250083-02)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEx	<0.300	0.300	01/08/2025	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	688	16.0	01/09/2025	ND	480	120	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	17.8	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 91.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.4 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 19 (H250083-03)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEX	<0.300	0.300	01/08/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 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	160	16.0	01/09/2025	ND	480	120	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 96.9 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 18 (H250083-04)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEX	<0.300	0.300	01/08/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 92.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.8 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 17 (H250083-05)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEX	<0.300	0.300	01/08/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 87.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: SW - 32 (H250083-06)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEX	<0.300	0.300	01/08/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 98.5 % 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: 01/08/2025  
 Reported: 01/13/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/08/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 42 ( 2.0' ) (H250083-07)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEX	<0.300	0.300	01/08/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 102 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 49 ( 2.0' ) (H250083-08)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEX	<0.300	0.300	01/08/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 104 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 61 ( 2.0' ) (H250083-09)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEX	<0.300	0.300	01/08/2025	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 52 ( 2.0' ) (H250083-10)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEX	<0.300	0.300	01/08/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 50 ( 2.0' ) (H250083-11)**

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	01/08/2025	ND	1.77	88.7	2.00	0.266		
Toluene*	<0.050	0.050	01/08/2025	ND	1.82	91.2	2.00	0.352		
Ethylbenzene*	<0.050	0.050	01/08/2025	ND	1.83	91.7	2.00	0.257		
Total Xylenes*	<0.150	0.150	01/08/2025	ND	5.61	93.5	6.00	0.188		
Total BTEX	<0.300	0.300	01/08/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 103 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 44 ( 2.0' ) (H250083-12)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 104 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 43 ( 2.0' ) (H250083-13)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	464	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	12.7	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 104 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 48 ( 2.0' ) (H250083-14)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 46 ( 2.0' ) (H250083-15)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	01/09/2025	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	01/09/2025	ND	198	99.2	200	1.10	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	191	95.5	200	0.0806	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 98.7 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 4 ( 2.0' ) (H250083-16)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 77.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 60 ( 2.0' ) (H250083-17)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1200	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	52.2	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 82.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.7 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 8 ( 2.0' ) (H250083-18)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 84.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.3 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 59 ( 2.0' ) (H250083-19)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 83.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.3 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 54 ( 2.0' ) (H250083-20)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 84.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.4 % 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: 01/08/2025  
 Reported: 01/13/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/08/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 11 ( 2.0' ) (H250083-21)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42	
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29	
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40	
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61	
Total BTEX	<0.300	0.300	01/09/2025	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 85.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.6 % 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: 01/08/2025  
 Reported: 01/13/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/08/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 58 ( 2.0' ) (H250083-22)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 85.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.6 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 57 ( 2.0' ) (H250083-23)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 84.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.5 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 47 ( 2.0' ) (H250083-24)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	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	240	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 86.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.3 % 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:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 55 ( 2.0' ) (H250083-25)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	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	480	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 93.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	01/08/2025	Sampling Date:	01/08/2025
Reported:	01/13/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 56 ( 2.0' ) (H250083-26)**

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	01/09/2025	ND	1.75	87.7	2.00	3.42		
Toluene*	<0.050	0.050	01/09/2025	ND	1.89	94.6	2.00	1.29		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	1.92	96.1	2.00	1.40		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	5.75	95.9	6.00	1.61		
Total BTEX	<0.300	0.300	01/09/2025	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	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 92.9 % 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: 01/08/2025  
 Reported: 01/13/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/08/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 14 ( 2.0' ) (H250083-27)**

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	01/09/2025	ND	1.79	89.3	2.00	7.98		
Toluene*	<0.050	0.050	01/09/2025	ND	1.94	97.0	2.00	0.704		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	2.04	102	2.00	2.08		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	6.23	104	6.00	1.72		
Total BTEX	<0.300	0.300	01/09/2025	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	288	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 94.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.7 % 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: 01/08/2025  
 Reported: 01/13/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/08/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 53 ( 2.0' ) (H250083-28)**

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	01/09/2025	ND	1.79	89.3	2.00	7.98		
Toluene*	<0.050	0.050	01/09/2025	ND	1.94	97.0	2.00	0.704		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	2.04	102	2.00	2.08		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	6.23	104	6.00	1.72		
Total BTEX	<0.300	0.300	01/09/2025	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	32.0	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 94.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.9 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 01/08/2025  
 Reported: 01/13/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/08/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Alyssa Parras

**Sample ID: BH - 45 ( 2.0' ) (H250083-29)**

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	01/09/2025	ND	1.79	89.3	2.00	7.98		
Toluene*	<0.050	0.050	01/09/2025	ND	1.94	97.0	2.00	0.704		
Ethylbenzene*	<0.050	0.050	01/09/2025	ND	2.04	102	2.00	2.08		
Total Xylenes*	<0.150	0.150	01/09/2025	ND	6.23	104	6.00	1.72		
Total BTEX	<0.300	0.300	01/09/2025	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	32.0	16.0	01/09/2025	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	01/09/2025	ND	185	92.6	200	1.19	
DRO >C10-C28*	<10.0	10.0	01/09/2025	ND	174	87.2	200	1.55	
EXT DRO >C28-C36	<10.0	10.0	01/09/2025	ND					

Surrogate: 1-Chlorooctane 97.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.7 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### 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.
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

ANALYSIS REQUEST

(Circle or Specify Method No.)

Client Name: Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name: Emerald Federal Battery

281-755-8965

Project #:

chuck.terhune@tetratech.com

Project Location: Lea County, NM

Project #:

212C-MD-03725

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

LAB # 1433083

LAB USE ONLY

H-250853																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</	
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Relinquished by: Date: Time: 1:372

Relinquished by: Date: Time: 1-8-25

Relinquished by: Date: Time:

Received by: Date: Time: 1-8-05 1330

Received by: Date: Time: 1330

Received by: Date: Time:

LAB USE ONLY

Sample Temperature 83-90°F

83-90°F

REMARKS: Standard TAT

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



## Analysis Request of Chain of Custody Record

Page 2 of 2



## Tetra Tech, Inc.

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

## ANALYSIS REQUEST

(Circle or Specify Method No.)

Client Name: Maverick Natural Resources

Site Manager: Chuck Terhune

Project Name: Emerald Federal Battery

281-755-8965

Project #: chuck.terhune@tetratech.com

Project Location: Lea County, NM

212C-MD-03725

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

LAB USE ONLY

		SAMPLING		MATRIX				PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME	WATER	SOIL	HCL	HNO <sub>3</sub>	ICE						
1	BH-50 (2.0')	1/8/2025	0950	X	X			X				X	X	BTEX 8021B BTEX 8260B
2	BH-44 (2.0')	1/8/2025	1000	X	X			X				X	X	TPH TX1005 (Ext to C35)
3	BH-43 (2.0')	1/8/2025	1005	X	X			X				X	X	TPH 8015M ( GRO - DRO - ORO - MRO)
4	BH-48 (2.0')	1/8/2025	1010	X	X			X				X	X	PAH 8270C
5	BH-46 (2.0')	1/8/2025	1030	X	X			X				X	X	Total Metals Ag As Ba Cd Cr Pb Se Hg
6	BH-4 (2.0')	1/8/2025	1035	X	X			X				X	X	TCLP Metals Ag As Ba Cd Cr Pb Se Hg
7	BH-60 (2.0')	1/8/2025	1035	X	X			X				X	X	TCLP Volatiles
8	BH-8 (2.0')	1/8/2025	1040	X	X			X				X	X	TCLP Semi Volatiles
9	BH-59 (2.0')	1/8/2025	1045	X	X			X				X	X	RCI
10	BH-54 (2.0')	1/8/2025	1045	X	X			X				X	X	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: Time: 1332

Relinquished by: Date: Time: 1835

Relinquished by: Date: Time: 1835

Received by: Date: Time: 1835

Date: Time: 1835

LAB USE ONLY

REMARKS: Standard TAT

Sample Temperature 33°C

27°C #140

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



## Analysis Request of Chain of Custody Record



## Tetra Tech, Inc.

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

## ANALYSIS REQUEST

(Circle or Specify Method No.)

Client Name: Maverick Natural Resources

Site Manager:

Chuck Terhune

Project Name: Emerald Federal Battery

281-755-8965  
[chuck.terhune@tetratech.com](mailto:chuck.terhune@tetratech.com)Project Location:  
(county, state)

Lea County, NM

Project #:

212C-MD-03725

Invoice to:

Attn: Chuck Terhune

Receiving Laboratory:

Cardinal Labs

Sampler Signature:

Jorge Fernandez

Comments:

Include : Chris Straub [Chris.Straub@tetratech.com](mailto:Chris.Straub@tetratech.com) Jorge Fernandez [jorge.fernandez@tetratech.com](mailto:jorge.fernandez@tetratech.com)LAB #  
4950053LAB USE  
ONLY

LAB # LAB USE ONLY	INCLUDE: CRIS ON CARD	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Relinquished by: [Signature] Date: 1/8/25 Time: 1332

Relinquished by: [Signature] Date: 1/8/25 Time: 1332

Relinquished by: [Signature] Date: 1/8/25 Time: 1332

Received by: [Signature] Date: 1/8/25 Time: 1332

Received by: [Signature] Date: 1/8/25 Time: 1332

Sample Temperature  
33.6°C  
2.7 = #146

REMARKS: Standard TAT

- ☒ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY



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---

January 14, 2025

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/10/25 12:36.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, 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: 01/10/2025  
 Reported: 01/14/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/10/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 53 (2.0') (H250109-01)**

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	01/10/2025	ND	1.94	97.0	2.00	6.12	QM-07, QR-03
Toluene*	<0.050	0.050	01/10/2025	ND	1.97	98.4	2.00	3.52	QR-03
Ethylbenzene*	<0.050	0.050	01/10/2025	ND	2.02	101	2.00	2.70	QR-03
Total Xylenes*	<0.150	0.150	01/10/2025	ND	6.25	104	6.00	2.56	QR-03
Total BTEX	<0.300	0.300	01/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/10/2025	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	01/10/2025	ND	218	109	200	7.51	
DRO >C10-C28*	<10.0	10.0	01/10/2025	ND	197	98.7	200	7.11	
EXT DRO >C28-C36	<10.0	10.0	01/10/2025	ND					

Surrogate: 1-Chlorooctane 99.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.8 % 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: 01/10/2025  
 Reported: 01/14/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/10/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 17 (2.0') (H250109-02)**

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	01/10/2025	ND	1.94	97.0	2.00	6.12		
Toluene*	<0.050	0.050	01/10/2025	ND	1.97	98.4	2.00	3.52		
Ethylbenzene*	<0.050	0.050	01/10/2025	ND	2.02	101	2.00	2.70		
Total Xylenes*	<0.150	0.150	01/10/2025	ND	6.25	104	6.00	2.56		
Total BTEX	<0.300	0.300	01/10/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/10/2025	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	01/10/2025	ND	218	109	200	7.51	
DRO >C10-C28*	<10.0	10.0	01/10/2025	ND	197	98.7	200	7.11	
EXT DRO >C28-C36	<10.0	10.0	01/10/2025	ND					

Surrogate: 1-Chlorooctane 108 % 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



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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: 01/10/2025  
 Reported: 01/14/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/10/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 41 (2.0') (H250109-03)**

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	01/10/2025	ND	1.94	97.0	2.00	6.12		
Toluene*	<0.050	0.050	01/10/2025	ND	1.97	98.4	2.00	3.52		
Ethylbenzene*	<0.050	0.050	01/10/2025	ND	2.02	101	2.00	2.70		
Total Xylenes*	<0.150	0.150	01/10/2025	ND	6.25	104	6.00	2.56		
Total BTEX	<0.300	0.300	01/10/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/10/2025	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	01/10/2025	ND	218	109	200	7.51	
DRO >C10-C28*	<10.0	10.0	01/10/2025	ND	197	98.7	200	7.11	
EXT DRO >C28-C36	<10.0	10.0	01/10/2025	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.0 % 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: 01/10/2025  
 Reported: 01/14/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/10/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 45 (2.0') (H250109-04)**

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	01/10/2025	ND	1.94	97.0	2.00	6.12	
Toluene*	<0.050	0.050	01/10/2025	ND	1.97	98.4	2.00	3.52	
Ethylbenzene*	<0.050	0.050	01/10/2025	ND	2.02	101	2.00	2.70	
Total Xylenes*	<0.150	0.150	01/10/2025	ND	6.25	104	6.00	2.56	
Total BTEX	<0.300	0.300	01/10/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/10/2025	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	01/10/2025	ND	218	109	200	7.51	
DRO >C10-C28*	<10.0	10.0	01/10/2025	ND	197	98.7	200	7.11	
EXT DRO >C28-C36	<10.0	10.0	01/10/2025	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 99.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

Page 1 of 1

**Tetra Tech, Inc.**

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

[illegible]

Page 7 of 7



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January 17, 2025

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/16/25 12:05.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

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: 01/16/2025  
 Reported: 01/17/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/10/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: BH - 60 (2.5') (H250245-01)**

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	01/16/2025	ND	2.08	104	2.00	0.868		
Toluene*	<0.050	0.050	01/16/2025	ND	2.21	110	2.00	0.229		
Ethylbenzene*	<0.050	0.050	01/16/2025	ND	2.25	112	2.00	0.127		
Total Xylenes*	<0.150	0.150	01/16/2025	ND	6.82	114	6.00	0.126		
Total BTEX	<0.300	0.300	01/16/2025	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/17/2025	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	01/16/2025	ND	181	90.6	200	2.50	
DRO >C10-C28*	<10.0	10.0	01/16/2025	ND	179	89.3	200	0.390	
EXT DRO >C28-C36	<10.0	10.0	01/16/2025	ND					

Surrogate: 1-Chlorooctane 101 % 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



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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: 01/16/2025  
 Reported: 01/17/2025  
 Project Name: EMERALD FEDERAL BATTERY  
 Project Number: 212C-MD-03725  
 Project Location: MAVERICK - LEA COUNTY, NM

Sampling Date: 01/16/2025  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: SW - 20 (H250245-02)**

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	01/16/2025	ND	2.08	104	2.00	0.868		
Toluene*	<0.050	0.050	01/16/2025	ND	2.21	110	2.00	0.229		
Ethylbenzene*	<0.050	0.050	01/16/2025	ND	2.25	112	2.00	0.127		
Total Xylenes*	<0.150	0.150	01/16/2025	ND	6.82	114	6.00	0.126		
Total BTEX	<0.300	0.300	01/16/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: KV						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/17/2025	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	01/16/2025	ND	181	90.6	200	2.50	
DRO >C10-C28*	<10.0	10.0	01/16/2025	ND	179	89.3	200	0.390	
EXT DRO >C28-C36	<10.0	10.0	01/16/2025	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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### 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".

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Celey D. Keene, Lab Director/Quality Manager



### Analysis Request of Chain of Custody Record



**Tetra Tech, Inc.**

Midland, Texas 79701  
Tel (432) 682-4559  
Fax (432) 682-3946

Page 1 of 1

Page 5 of 5

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ORIGINAL COPY

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---

January 20, 2025

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 01/16/25 12:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at

[www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

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

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

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

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701

Project: EMERALD FEDERAL BATTERY  
Project Number: 212C-MD-03725  
Project Manager: CHUCK TERHUNE  
Fax To: (432) 682-3946

Reported:  
20-Jan-25 17:12

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH - 60 (2.5')	H250245-01	Soil	16-Jan-25 09:45	16-Jan-25 12:05
SW - 20	H250245-02	Soil	16-Jan-25 09:50	16-Jan-25 12:05

01/20/25 - Client changed the sample date for -01 (see COC). This is the revised report and will replace the one sent on 01/17/25.

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

Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701

Project: EMERALD FEDERAL BATTERY  
Project Number: 212C-MD-03725  
Project Manager: CHUCK TERHUNE  
Fax To: (432) 682-3946

Reported:  
20-Jan-25 17:12

**BH - 60 (2.5')**  
**H250245-01 (Soil)**

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

Chloride	<16.0		16.0	mg/kg	4	5011741	KV	17-Jan-25	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	5011613	JH	16-Jan-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5011613	JH	16-Jan-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5011613	JH	16-Jan-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5011613	JH	16-Jan-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5011613	JH	16-Jan-25	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134 5011613 JH 16-Jan-25 8021B

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	5011624	MS	16-Jan-25	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	5011624	MS	16-Jan-25	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	5011624	MS	16-Jan-25	8015B	

Surrogate: 1-Chlorooctane 101 % 48.2-134 5011624 MS 16-Jan-25 8015B

Surrogate: 1-Chlorooctadecane 101 % 49.1-148 5011624 MS 16-Jan-25 8015B

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701

Project: EMERALD FEDERAL BATTERY  
Project Number: 212C-MD-03725  
Project Manager: CHUCK TERHUNE  
Fax To: (432) 682-3946

Reported:  
20-Jan-25 17:12

**SW - 20**  
**H250245-02 (Soil)**

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

Chloride	<16.0		16.0	mg/kg	4	5011741	KV	17-Jan-25	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	5011613	JH	16-Jan-25	8021B	
Toluene*	<0.050		0.050	mg/kg	50	5011613	JH	16-Jan-25	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	5011613	JH	16-Jan-25	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	5011613	JH	16-Jan-25	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	5011613	JH	16-Jan-25	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			115 %	71.5-134		5011613	JH	16-Jan-25	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	5011624	MS	16-Jan-25	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	5011624	MS	16-Jan-25	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	5011624	MS	16-Jan-25	8015B	

Surrogate: 1-Chlorooctane			103 %	48.2-134		5011624	MS	16-Jan-25	8015B	
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Surrogate: 1-Chlorooctadecane			102 %	49.1-148		5011624	MS	16-Jan-25	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701

Project: EMERALD FEDERAL BATTERY  
Project Number: 212C-MD-03725  
Project Manager: CHUCK TERHUNE  
Fax To: (432) 682-3946

Reported:  
20-Jan-25 17:12

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 5011741 - 1:4 DI Water</b>									
<b>Blank (5011741-BLK1)</b>				Prepared & Analyzed: 17-Jan-25					
Chloride	ND	16.0	mg/kg						
<b>LCS (5011741-BS1)</b>				Prepared & Analyzed: 17-Jan-25					
Chloride	432	16.0	mg/kg	400		108	80-120		
<b>LCS Dup (5011741-BSD1)</b>				Prepared & Analyzed: 17-Jan-25					
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TETRA TECH  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701

Project: EMERALD FEDERAL BATTERY  
Project Number: 212C-MD-03725  
Project Manager: CHUCK TERHUNE  
Fax To: (432) 682-3946

Reported:  
20-Jan-25 17:12

**Volatile Organic Compounds by EPA Method 8021 - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5011613 - Volatiles****Blank (5011613-BLK1)**

Prepared &amp; Analyzed: 16-Jan-25

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0565		mg/kg	0.0500		113	71.5-134			

**LCS (5011613-BS1)**

Prepared &amp; Analyzed: 16-Jan-25

Benzene	2.08	0.050	mg/kg	2.00		104	82.8-130			
Toluene	2.21	0.050	mg/kg	2.00		110	86-128			
Ethylbenzene	2.25	0.050	mg/kg	2.00		112	85.9-128			
m,p-Xylene	4.64	0.100	mg/kg	4.00		116	89-129			
o-Xylene	2.18	0.050	mg/kg	2.00		109	86.1-125			
Total Xylenes	6.82	0.150	mg/kg	6.00		114	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0531		mg/kg	0.0500		106	71.5-134			

**LCS Dup (5011613-BSD1)**

Prepared &amp; Analyzed: 16-Jan-25

Benzene	2.07	0.050	mg/kg	2.00		103	82.8-130	0.868	15.8	
Toluene	2.20	0.050	mg/kg	2.00		110	86-128	0.229	15.9	
Ethylbenzene	2.24	0.050	mg/kg	2.00		112	85.9-128	0.127	16	
m,p-Xylene	4.65	0.100	mg/kg	4.00		116	89-129	0.0432	16.2	
o-Xylene	2.18	0.050	mg/kg	2.00		109	86.1-125	0.303	16.7	
Total Xylenes	6.83	0.150	mg/kg	6.00		114	88.2-128	0.126	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0538		mg/kg	0.0500		108	71.5-134			

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
901 WEST WALL STREET , STE 100  
MIDLAND TX, 79701

Project: EMERALD FEDERAL BATTERY  
Project Number: 212C-MD-03725  
Project Manager: CHUCK TERHUNE  
Fax To: (432) 682-3946

Reported:  
20-Jan-25 17:12

**Petroleum Hydrocarbons by GC FID - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 5011624 - General Prep - Organics****Blank (5011624-BLK1)**

Prepared &amp; Analyzed: 16-Jan-25

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	47.9		mg/kg	50.0		95.8	48.2-134			
Surrogate: 1-Chlorooctadecane	46.6		mg/kg	50.0		93.1	49.1-148			

**LCS (5011624-BS1)**

Prepared &amp; Analyzed: 16-Jan-25

GRO C6-C10	181	10.0	mg/kg	200		90.6	81.5-123			
DRO >C10-C28	179	10.0	mg/kg	200		89.3	77.7-122			
Total TPH C6-C28	360	10.0	mg/kg	400		89.9	80.9-121			
Surrogate: 1-Chlorooctane	49.2		mg/kg	50.0		98.4	48.2-134			
Surrogate: 1-Chlorooctadecane	47.2		mg/kg	50.0		94.4	49.1-148			

**LCS Dup (5011624-BSD1)**

Prepared &amp; Analyzed: 16-Jan-25

GRO C6-C10	177	10.0	mg/kg	200		88.4	81.5-123	2.50	13	
DRO >C10-C28	178	10.0	mg/kg	200		88.9	77.7-122	0.390	15.6	
Total TPH C6-C28	355	10.0	mg/kg	400		88.6	80.9-121	1.45	18.5	
Surrogate: 1-Chlorooctane	49.4		mg/kg	50.0		98.7	48.2-134			
Surrogate: 1-Chlorooctadecane	47.0		mg/kg	50.0		93.9	49.1-148			

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager





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---

May 08, 2025

CHUCK TERHUNE

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: EMERALD FEDERAL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 05/02/25 14:24.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is 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:	05/02/2025	Sampling Date:	05/02/2025
Reported:	05/08/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 28 (4.0') (H252644-01)**

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	05/05/2025	ND	1.76	88.0	2.00	3.01	
Toluene*	<0.050	0.050	05/05/2025	ND	1.90	94.8	2.00	0.992	
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.92	96.2	2.00	0.378	
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.11	102	6.00	0.271	
Total BTEX	<0.300	0.300	05/05/2025	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	05/05/2025	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	05/05/2025	ND	199	99.5	200	1.86	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	194	96.9	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 77.4 % 44.4-145

Surrogate: 1-Chlorooctadecane 74.1 % 40.6-153

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:	05/02/2025	Sampling Date:	05/02/2025
Reported:	05/08/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 27 (4.0') (H252644-02)**

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	05/05/2025	ND	1.76	88.0	2.00	3.01		
Toluene*	<0.050	0.050	05/05/2025	ND	1.90	94.8	2.00	0.992		
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.92	96.2	2.00	0.378		
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.11	102	6.00	0.271		
Total BTEx	<0.300	0.300	05/05/2025	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	96.0	16.0	05/05/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/05/2025	ND	199	99.5	200	1.86	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	194	96.9	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 68.7 % 44.4-145

Surrogate: 1-Chlorooctadecane 66.1 % 40.6-153

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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:	05/02/2025	Sampling Date:	05/02/2025
Reported:	05/08/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 24 (4.0') (H252644-03)**

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	05/05/2025	ND	1.76	88.0	2.00	3.01		
Toluene*	<0.050	0.050	05/05/2025	ND	1.90	94.8	2.00	0.992		
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.92	96.2	2.00	0.378		
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.11	102	6.00	0.271		
Total BTEX	<0.300	0.300	05/05/2025	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	05/05/2025	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/05/2025	ND	199	99.5	200	1.86	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	194	96.9	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 79.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 76.4 % 40.6-153

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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:	05/02/2025	Sampling Date:	05/02/2025
Reported:	05/08/2025	Sampling Type:	Soil
Project Name:	EMERALD FEDERAL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03725	Sample Received By:	Alyssa Parras
Project Location:	MAVERICK - LEA COUNTY, NM		

**Sample ID: BH - 31 (4.0') (H252644-04)**

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	05/05/2025	ND	1.76	88.0	2.00	3.01		
Toluene*	<0.050	0.050	05/05/2025	ND	1.90	94.8	2.00	0.992		
Ethylbenzene*	<0.050	0.050	05/05/2025	ND	1.92	96.2	2.00	0.378		
Total Xylenes*	<0.150	0.150	05/05/2025	ND	6.11	102	6.00	0.271		
Total BTEx	<0.300	0.300	05/05/2025	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	05/05/2025	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/05/2025	ND	199	99.5	200	1.86	
DRO >C10-C28*	<10.0	10.0	05/05/2025	ND	194	96.9	200	1.77	
EXT DRO >C28-C36	<10.0	10.0	05/05/2025	ND					

Surrogate: 1-Chlorooctane 77.0 % 44.4-145

Surrogate: 1-Chlorooctadecane 77.2 % 40.6-153

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### Notes and Definitions

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

---

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

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Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

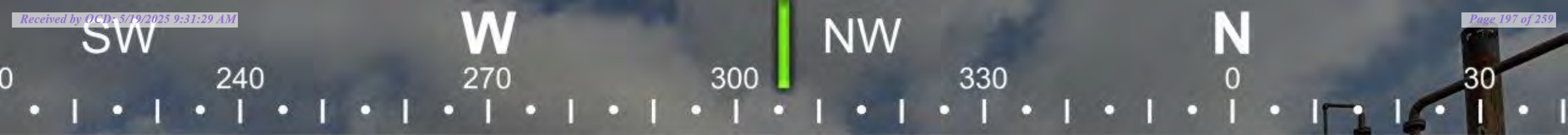
† Cardinal cannot accept verbal changes. Please email changes to [celey.keene@cardinallabsnm.com](mailto:celey.keene@cardinallabsnm.com)

Site Assessment and Closure Request  
Maverick Permian, LLC  
Emerald Federal Battery  
NMOCD Incident ID# nAPP2412958102

May 8, 2025

## **ATTACHMENT 3 – PHOTOGRAPHIC DOCUMENTATION**





● 32.832218°, -103.781265° ±13ft ▲ 4047ft



Endeavor

10 May 2024, 7:53:07 AM



W

NW

N

NE

240

270

300

330

0

30

60

● 32.832216°, -103.781335° ±13ft ▲ 4047ft



Staining  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:53:55 AM



SW

W

NW

N

210

240

270

300

330

0

● 32.832205°, -103.781146° ±13ft ▲ 4039ft



Staining  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:54:31 AM





● 32.832276°, -103.781134° ±13ft ▲ 4038ft

Staining  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:54:47 AM





● 32.832275°, -103.781125° ±13ft ▲ 4037ft



Staining overspray  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:54:52 AM



SE

S

SW

W

0 150 180 210 240 270 300

● 32.832358°, -103.781041° ±13ft ▲ 4043ft



Staining overspray  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:55:22 AM





● 32.832369°, -103.781032° ±13ft ▲ 4043ft

Staining overspray  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:55:26 AM



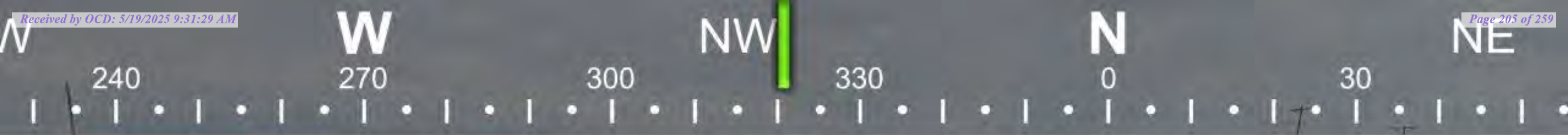


● 32.832479°, -103.781009° ±13ft ▲ 4043ft

Staining overspray  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:55:53 AM





● 32.832533°, -103.781005° ±13ft ▲ 4042ft



Staining overspray  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:56:07 AM



● 32.832586°, -103.781031° ±13ft ▲ 4040ft



Staining overspray  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:56:15 AM



NE

E

SE

S

30

60

90

120

150

180

● 32.832667°, -103.781315° ±42ft ▲ 4059ft



Staining overspray  
Maverick

Emerald Tank Battery release  
10 May 2024, 7:57:12 AM



SW

W

NW

N

210

240

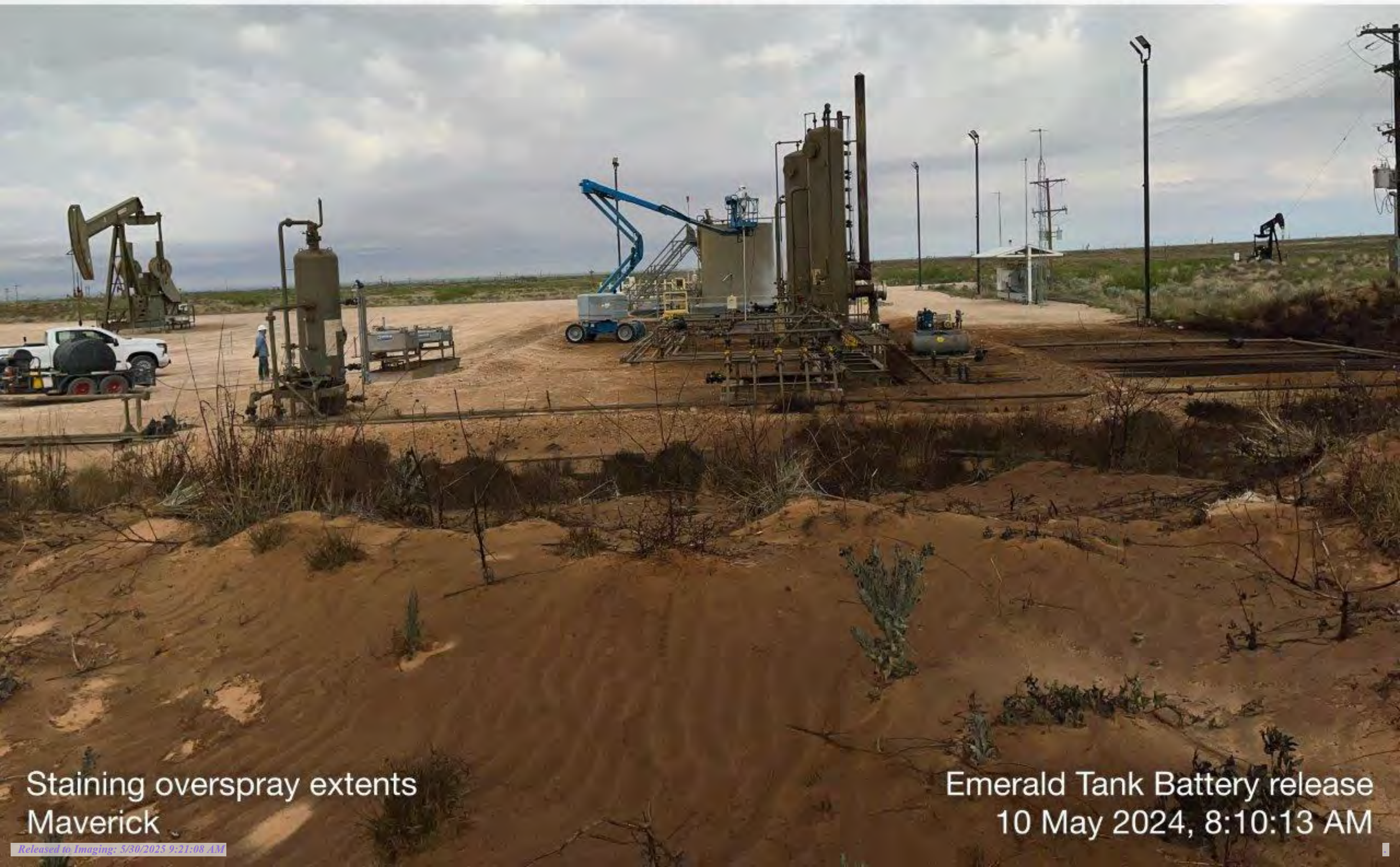
270

300

330

0

● 32.832241°, -103.780912° ±13ft ▲ 4047ft



Staining overspray extents  
Maverick

Emerald Tank Battery release  
10 May 2024, 8:10:13 AM





☀ 63°NE (T) LAT: 32.832259 LON: -103.781530 ±5m ▲ 1231m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:18:41 MST



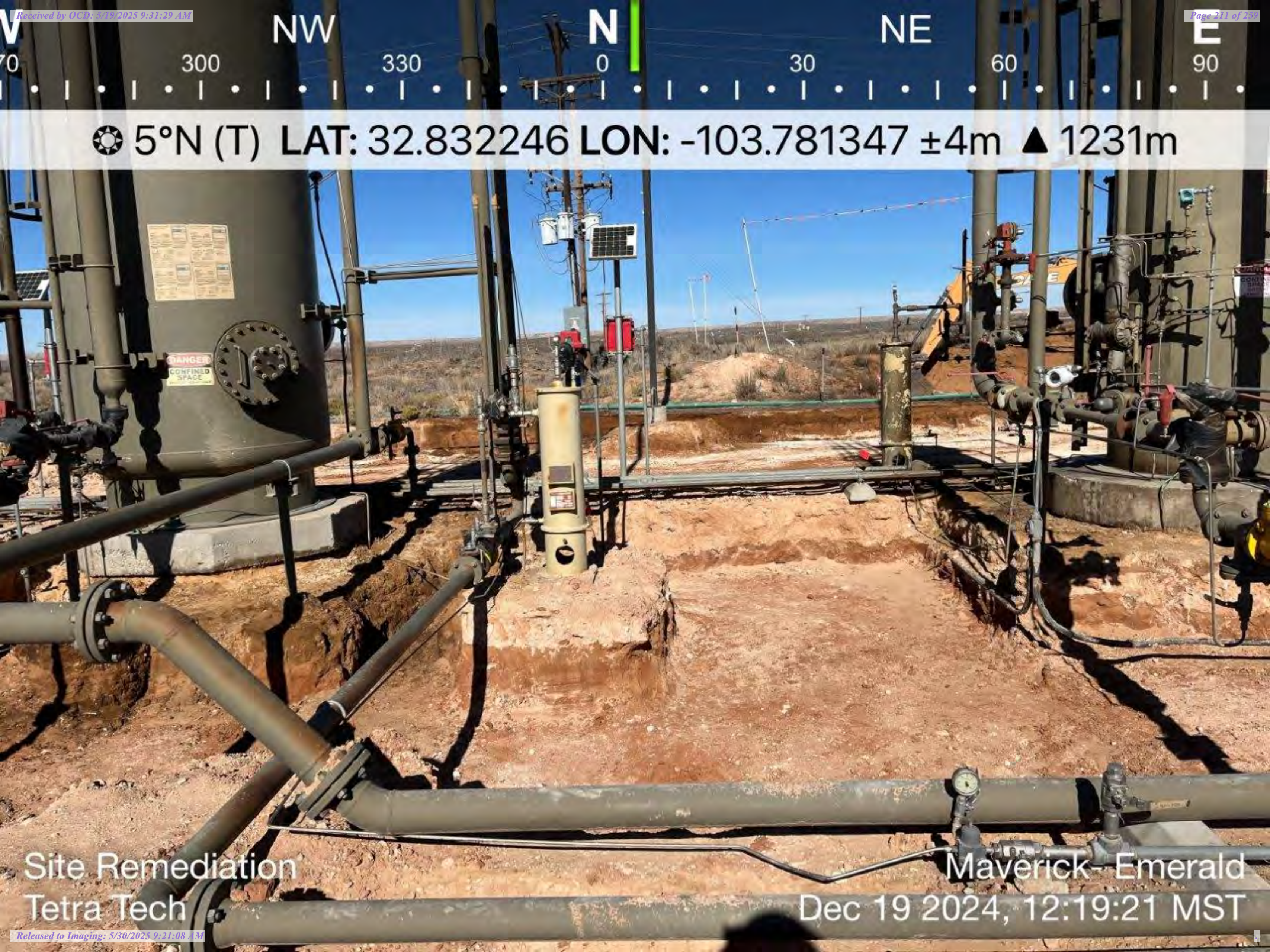


☀ 30°NE (T) LAT: 32.832259 LON: -103.781522 ±5m ▲ 1230m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:18:46 MST





☀ 5°N (T) LAT: 32.832246 LON: -103.781347 ±4m ▲ 1231m

Site Remediation  
Tetra Tech

Maverick - Emerald  
Dec 19 2024, 12:19:21 MST



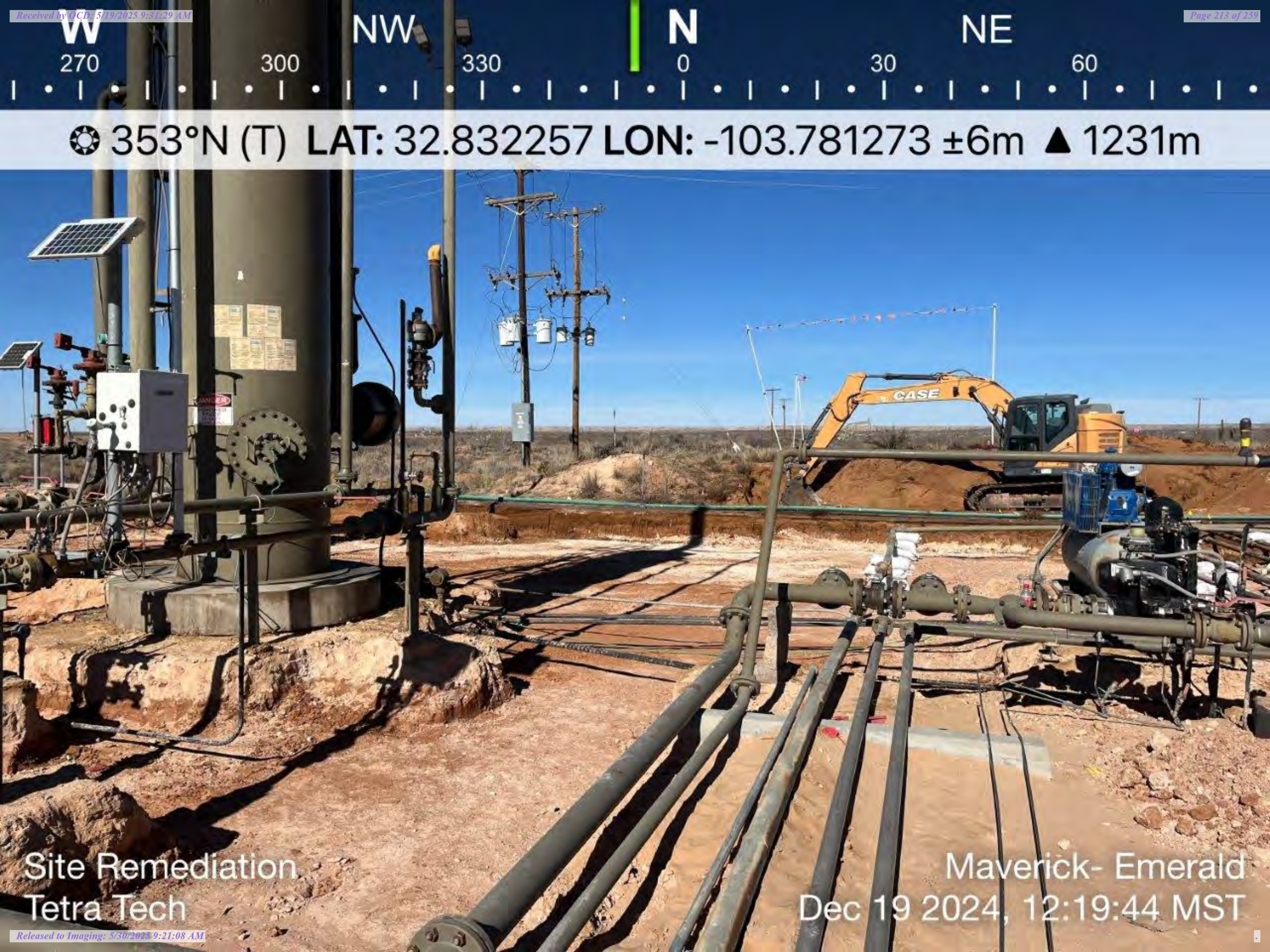


SW 240 W 270 NW 300 330 N 0 30  
☉ 310°NW (T) LAT: 32.832248 LON: -103.781250 ±6m ▲ 1231m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:19:39 MST





☀ 353°N (T) LAT: 32.832257 LON: -103.781273 ±6m ▲ 1231m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:19:44 MST





☀ 303°NW (T) LAT: 32.832298 LON: -103.781132 ±4m ▲ 1231m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:20:10 MST



SW

W

NW

N

210

240

270

300

330

0

☉ 279°W (T) LAT: 32.832347 LON: -103.781123 ±4m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:20:23 MST





☉ 253°W (T) LAT: 32.832437 LON: -103.781148 ±3m ▲ 1232m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:20:45 MST



SE

S

SW

W

120

150

180

210

240

270

☀ 202°S (T) LAT: 32.832436 LON: -103.781146 ±3m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:20:51 MST





☉ 222°SW (T) LAT: 32.832439 LON: -103.781264 ±4m ▲ 1231m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:21:08 MST



NE

E

SE

S

SW

60

90

120

150

180

210

☀ 131°SE (T) LAT: 32.832408 LON: -103.781463 ±4m ▲ 1230m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:21:42 MST



E

SE

S

SW

90

120

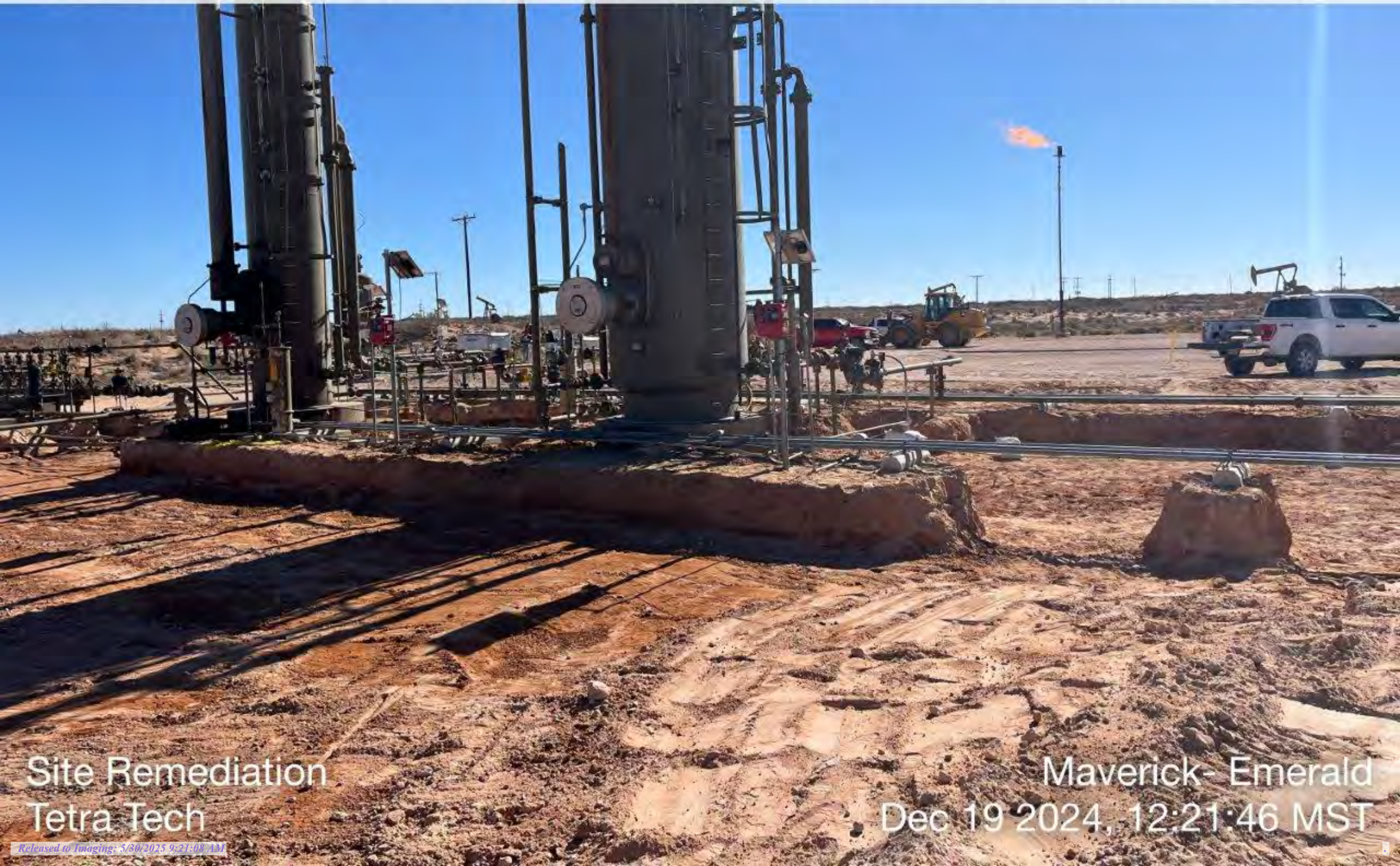
150

180

210

240

☀ 156°SE (T) LAT: 32.832408 LON: -103.781457 ±4m ▲ 1230m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Dec 19 2024, 12:21:46 MST



SW

W

NW

N

210

240

270

300

330

0

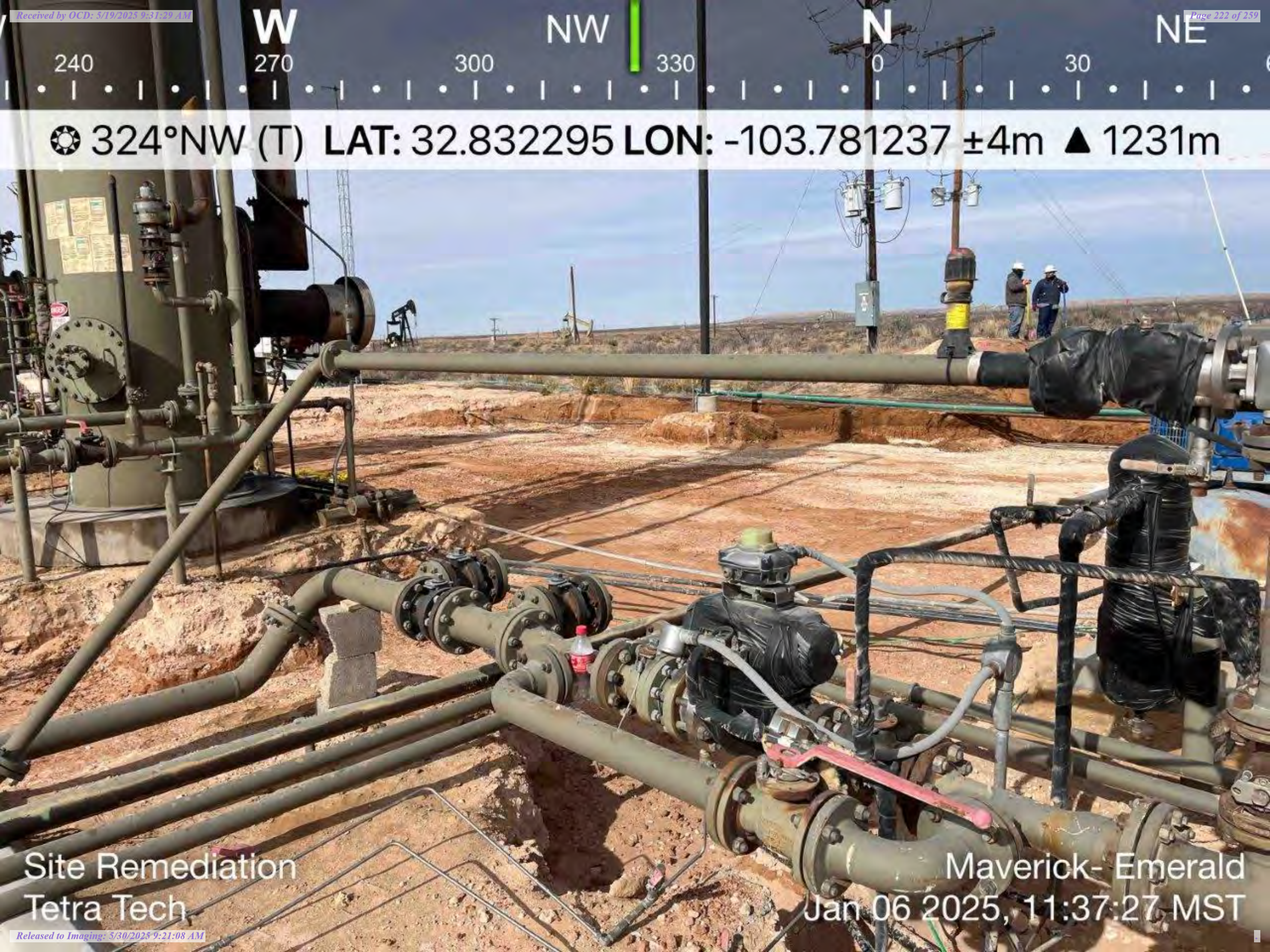
☉ 293°NW (T) LAT: 32.832293 LON: -103.781260 ±2m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:37:22 MST





☀ 324°NW (T) LAT: 32.832295 LON: -103.781237 ±4m ▲ 1231m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:37:27 MST





☉ 324°NW (T) LAT: 32.832299 LON: -103.781128 ±5m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:37:42 MST



SW

W

NW

N

210

240

270

300

330

0

☉ 283°W (T) LAT: 32.832349 LON: -103.781090 ±4m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:37:50 MST



SW

W

NW

N

210

240

270

300

330

0

☉ 283°W (T) LAT: 32.832346 LON: -103.781093 ±4m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:37:56 MST





☉ 78°E (T) LAT: 32.832298 LON: -103.781581 ±3m ▲ 1229m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:38:41 MST



NE

E

SE

S

30

60

90

120

150

180

☉ 100°E (T) LAT: 32.832323 LON: -103.781569 ±3m ▲ 1229m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:38:48 MST





☉ 84°E (T) LAT: 32.832342 LON: -103.781541 ±3m ▲ 1230m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:38:54 MST



NE

E

SE

S

30

60

90

120

150

180

☉ 99°E (T) LAT: 32.832418 LON: -103.781487 ±3m ▲ 1230m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:39:09 MST





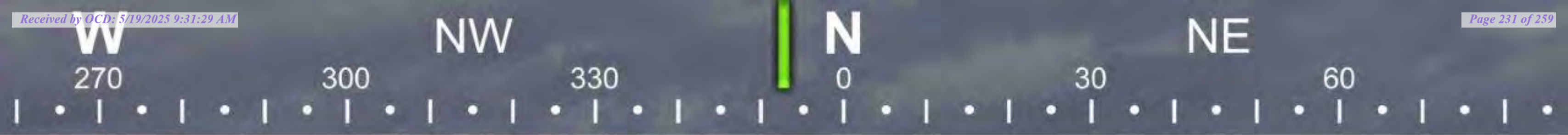
☉ 78°E (T) LAT: 32.832454 LON: -103.781329 ±3m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 06 2025, 11:39:26 MST





☉ 353°N (T) LAT: 32.832273 LON: -103.781123 ±4m ▲ 1232m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:05:32 MST



SW

W

NW

N

210

240

270

300

330

0

☉ 282°W (T) LAT: 32.832312 LON: -103.781101 ±4m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:05:43 MST





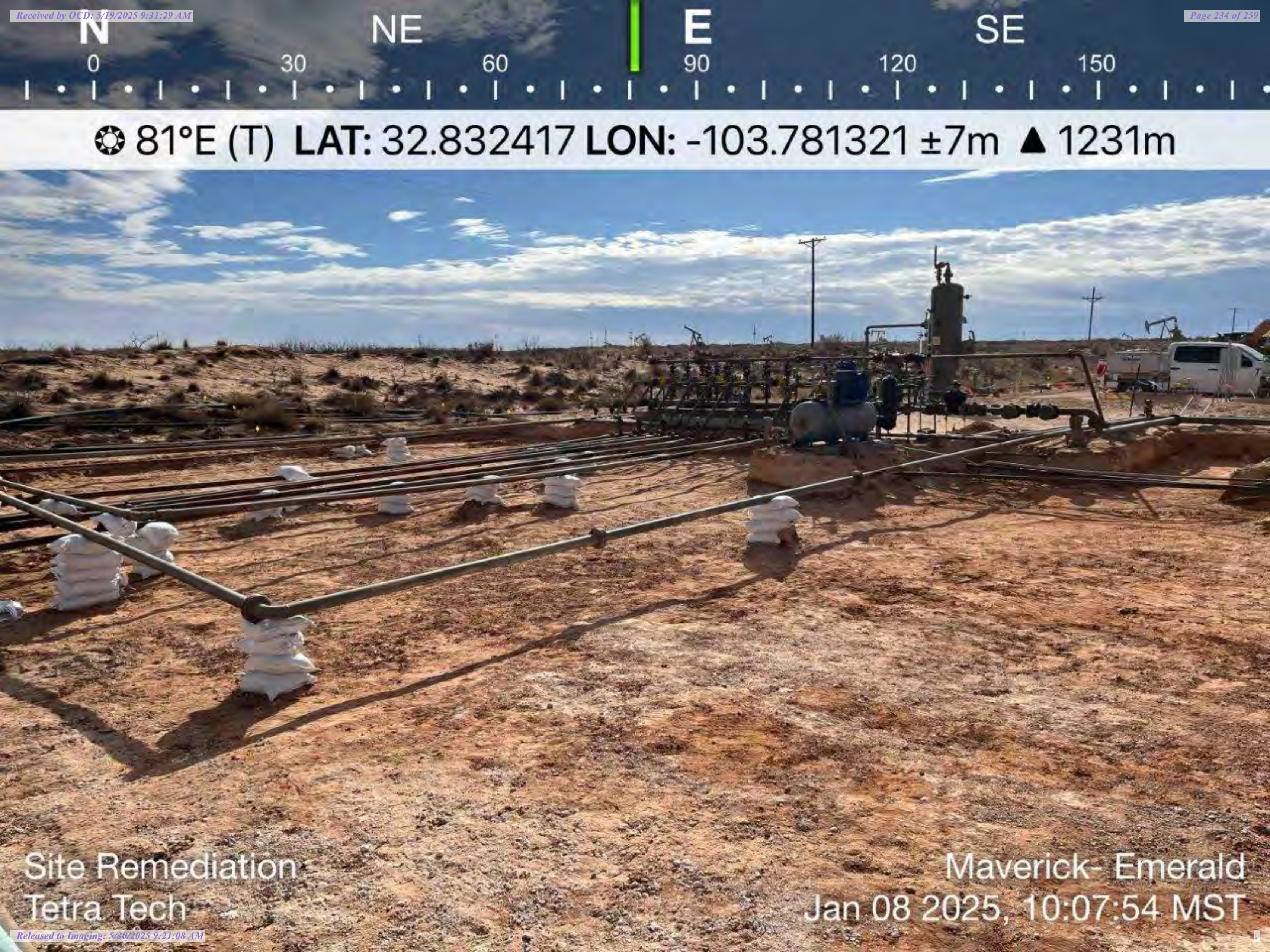
SE 150 S 180 SW 210 W 240 270 300 NW

☉ 229°SW (T) LAT: 32.832534 LON: -103.781021 ±7m ▲ 1232m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:06:39 MST



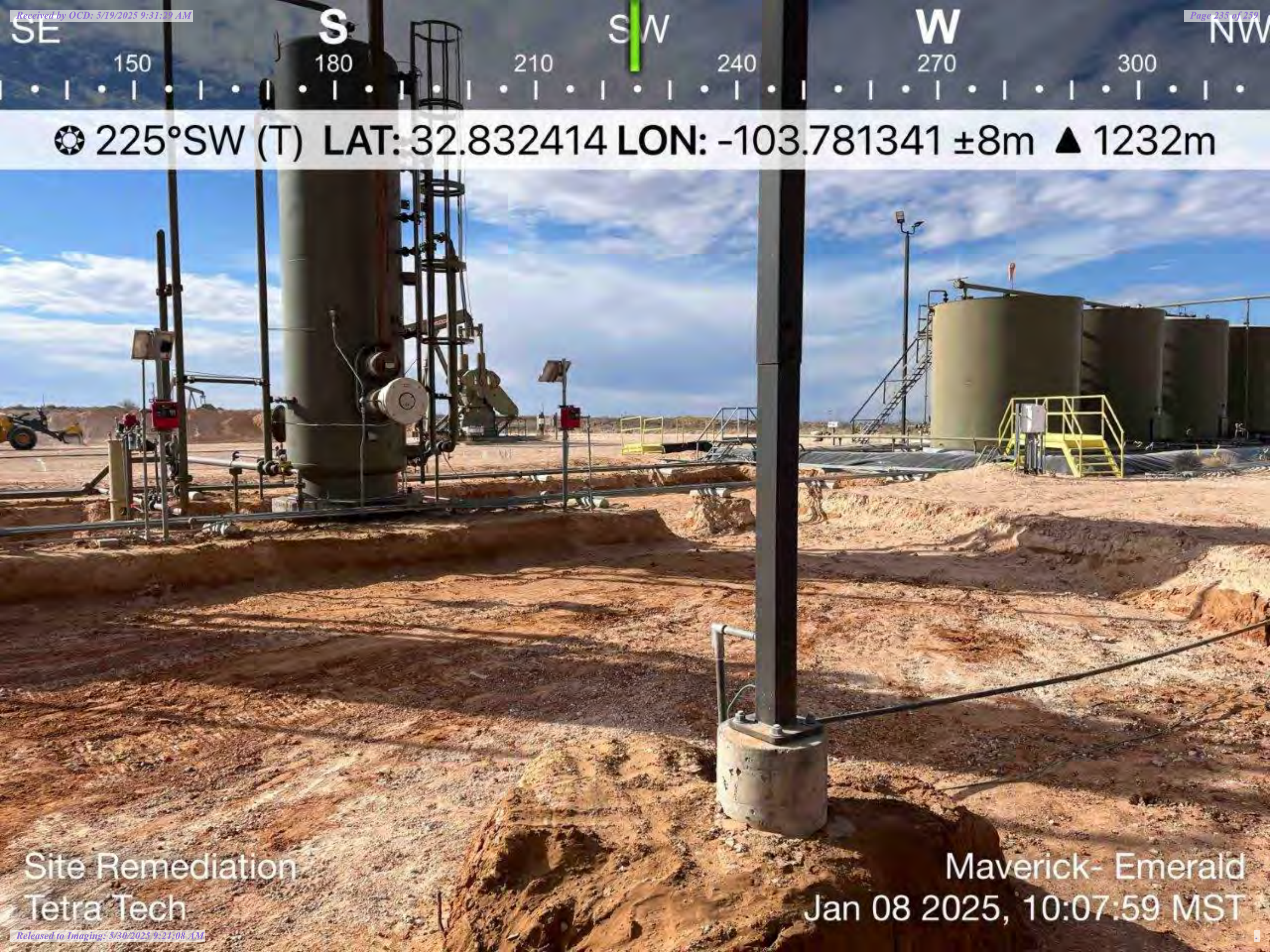


☀ 81°E (T) LAT: 32.832417 LON: -103.781321 ±7m ▲ 1231m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:07:54 MST





☉ 225°SW (T) LAT: 32.832414 LON: -103.781341 ±8m ▲ 1232m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:07:59 MST





☀ 92°E (T) LAT: 32.832390 LON: -103.781456 ±7m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:08:21 MST





☉ 92°E (T) LAT: 32.832384 LON: -103.781451 ±9m ▲ 1231m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:08:24 MST





☉ 93°E (T) LAT: 32.832334 LON: -103.781577 ±3m ▲ 1232m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:08:49 MST





☉ 66°NE (T) LAT: 32.832271 LON: -103.781577 ±3m ▲ 1230m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:08:58 MST



NW

N

NE

E

300

330

0

30

60

90

120

☉ 26°NE (T) LAT: 32.832257 LON: -103.781519 ±4m ▲ 1232m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:09:23 MST





☉ 45°NE (T) LAT: 32.832260 LON: -103.781499 ±5m ▲ 1232m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:09:27 MST



NW

N

NE

E

300

330

0

30

60

90

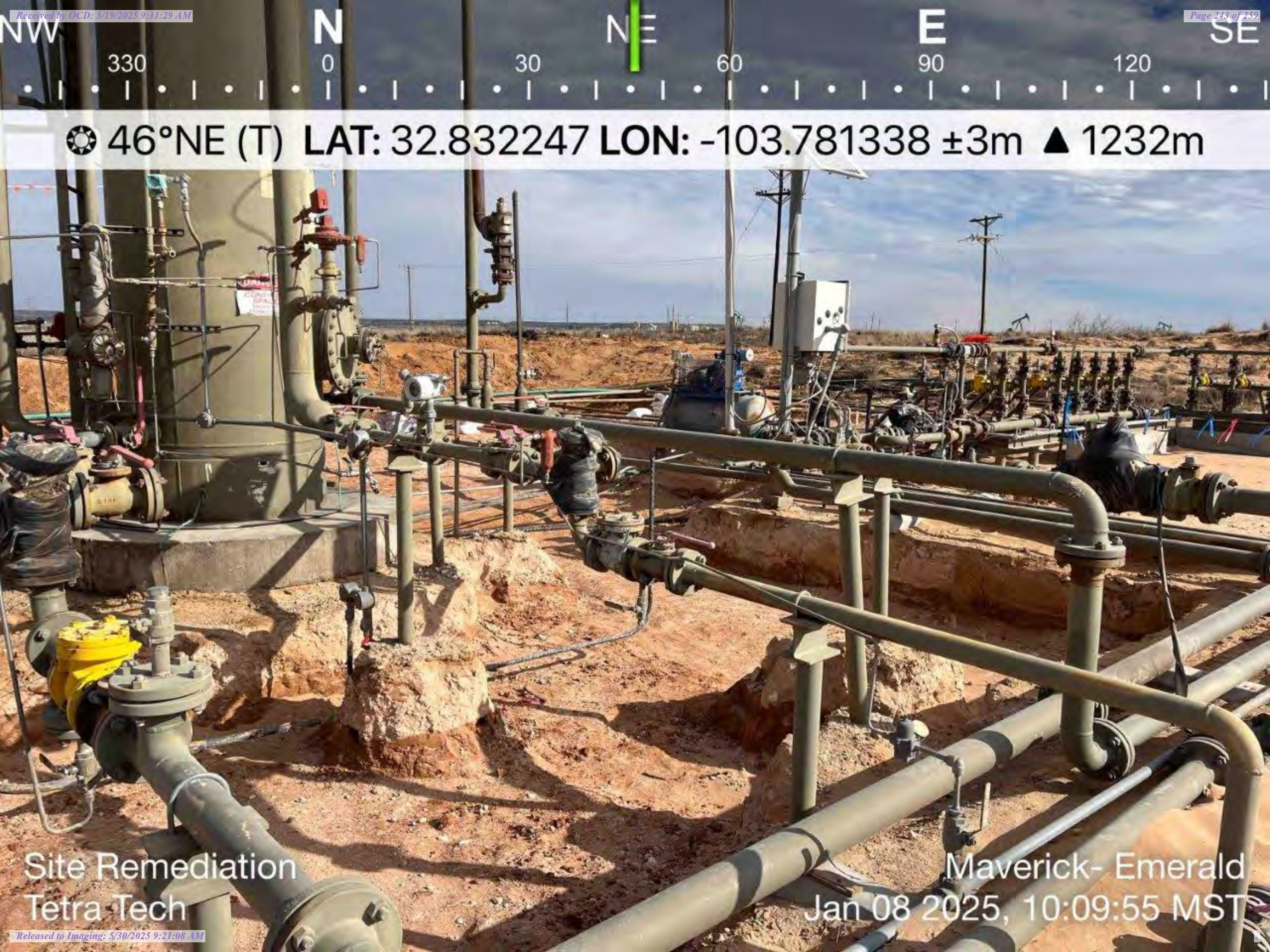
☀ 12°N (T) LAT: 32.832237 LON: -103.781335 ±3m ▲ 1233m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:09:46 MST





☀ 46°NE (T) LAT: 32.832247 LON: -103.781338 ±3m ▲ 1232m

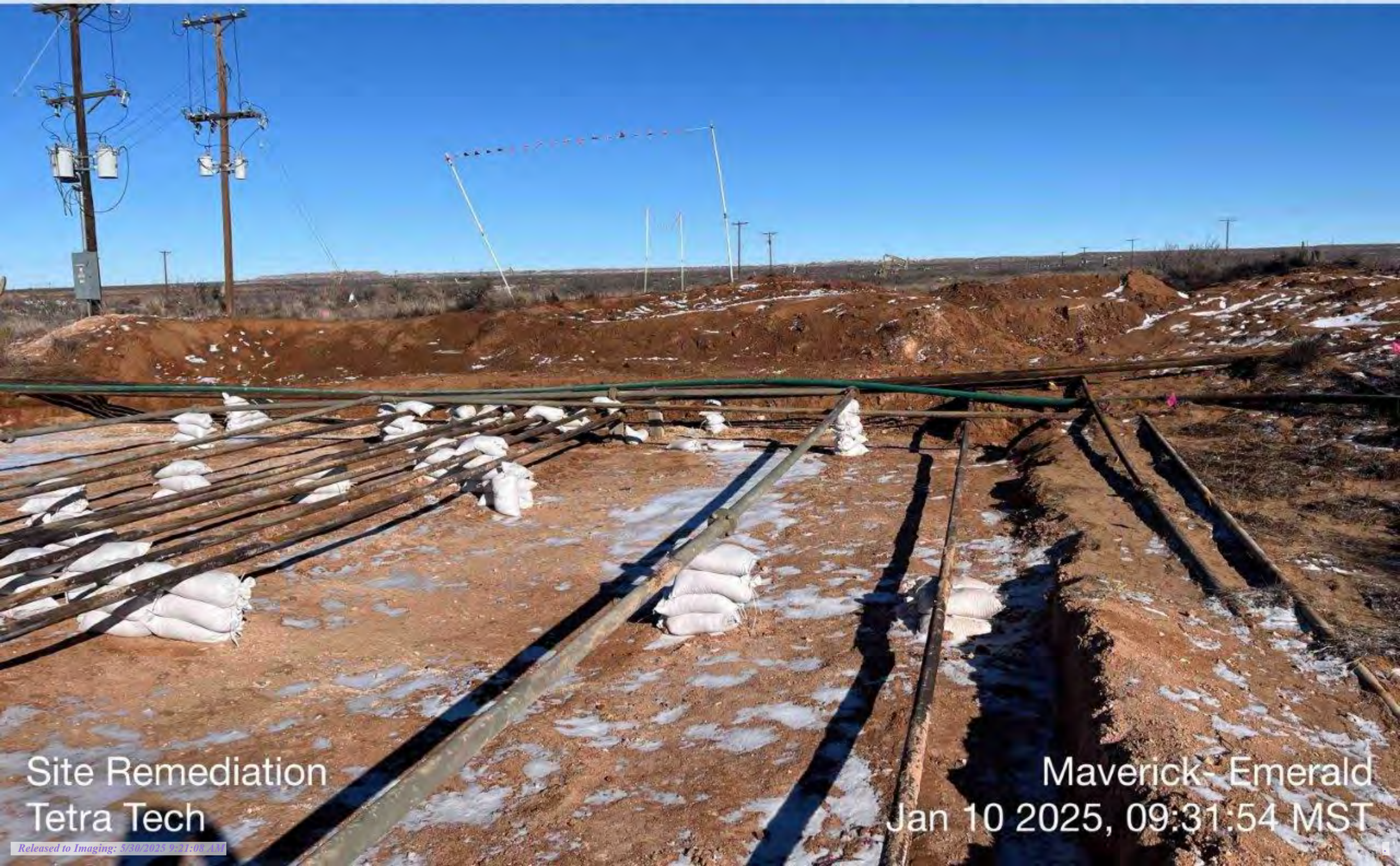
Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 08 2025, 10:09:55 MST





☀ 305°NW (T) LAT: 32.832305 LON: -103.781120 ±4m ▲ 1234m



Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 10 2025, 09:31:54 MST





258°W (T) LAT: 32.832308 LON: -103.781120 ±4m ▲ 1233m

Site Remediation  
Tetra Tech

Maverick- Emerald  
Jan 10 2025, 09:32:00 MST





☀ 311°NW (T) LAT: 32.832203 LON: -103.781375 ±4m ▲ 1232m



Site Remediation  
Tetra Tech

Maverick- Emerald Federal Battery  
Jan 30 2025, 10:35:51 MST



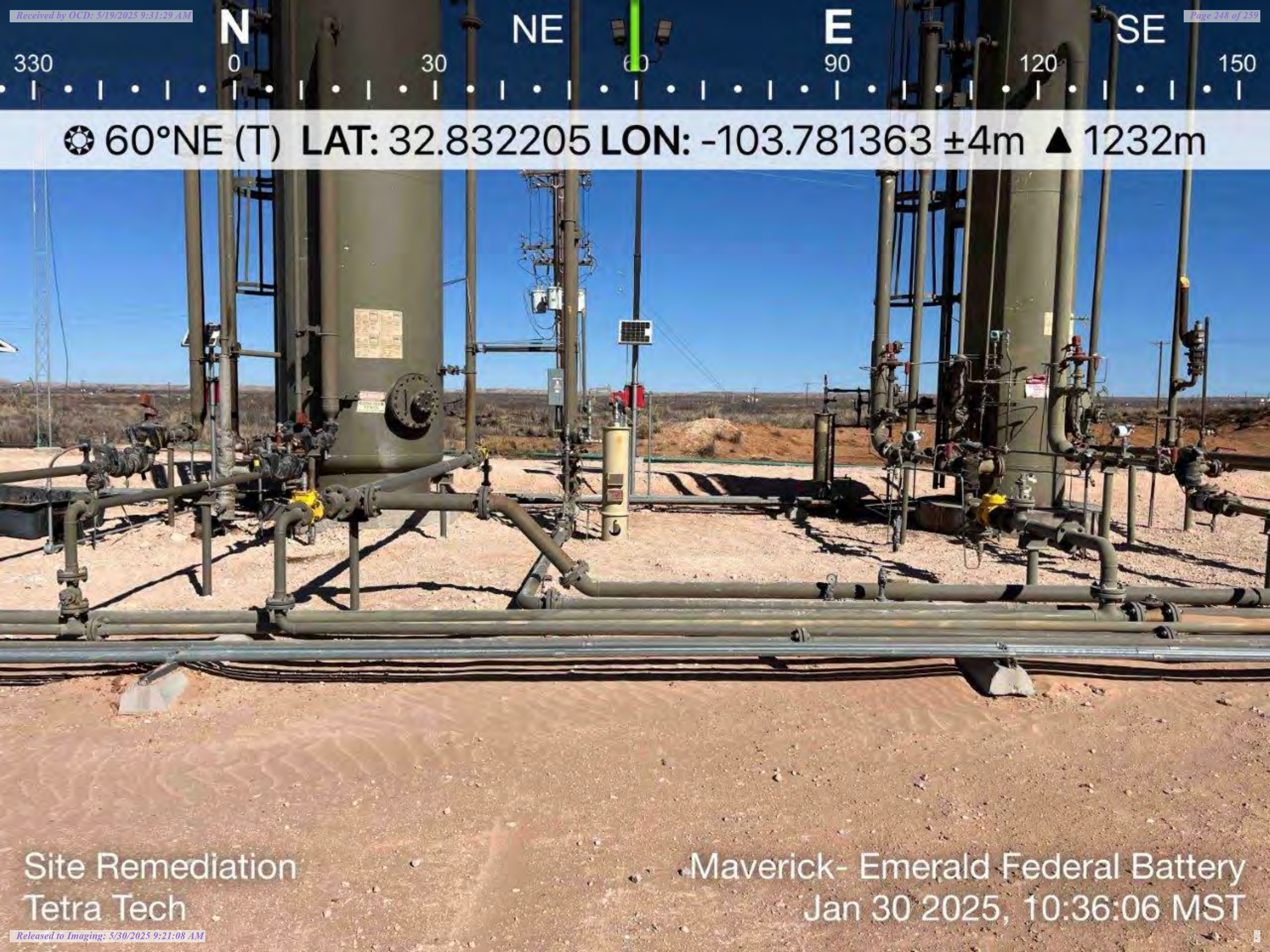


60°NE (T) LAT: 32.832200 LON: -103.781371 ±4m ▲ 1232m

Site Remediation  
Tetra Tech

Maverick- Emerald Federal Battery  
Jan 30 2025, 10:35:59 MST





☉ 60°NE (T) LAT: 32.832205 LON: -103.781363 ±4m ▲ 1232m

Site Remediation  
Tetra Tech

Maverick- Emerald Federal Battery  
Jan 30 2025, 10:36:06 MST





☀ 335°NW (T) LAT: 32.832228 LON: -103.781283 ±3m ▲ 1233m

Site Remediation  
Tetra Tech

Maverick- Emerald Federal Battery  
Jan 30 2025, 10:36:19 MST





☉ 299°NW (T) LAT: 32.832289 LON: -103.781103 ±4m ▲ 1233m



Site Remediation  
Tetra Tech

Maverick- Emerald Federal Battery  
Jan 30 2025, 10:36:38 MST



Site Assessment and Closure Request  
Maverick Permian, LLC  
Emerald Federal Battery  
NMOCD Incident ID# nAPP2412958102

May 8, 2025

## ATTACHMENT 4 – SEED MIXTURE



**NMSLO Seed Mix****Sandy (S)****SANDY (S) SITES SEED MIXTURE:**

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
<b>Grasses:</b>			
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
<b>Forbs:</b>			
Firewheel (Gaillardia)	VNS, Southern	1.0	D
Annual Sunflower	VNS, Southern	1.0	D
<b>Shrubs:</b>			
Fourwing Saltbush	VNS, Southern	1.0	F
<b>Total PLS/acre</b>		<b>16.0</b>	

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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Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS

Action 464074

QUESTIONS

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 464074
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2412958102
Incident Name	NAPP2412958102 EMERALD FEDERAL BATTERY RELEASE @ 0
Incident Type	Produced Water Release
Incident Status	Deferral Request Received
Incident Facility	[fAPP2212326602] EMERALD FEDERAL BATTERY

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Emerald Federal Battery Release
Date Release Discovered	05/08/2024
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Overflow - Tank, Pit, Etc.   Tank (Any)   Crude Oil   Released: 7 BBL   Recovered: 5 BBL   Lost: 2 BBL.
Produced Water Released (bbls) Details	Cause: Overflow - Tank, Pit, Etc.   Tank (Any)   Produced Water   Released: 38 BBL   Recovered: 25 BBL   Lost: 13 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.



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QUESTIONS, Page 2

Action 464074

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 464074
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

**Initial Response**

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

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

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

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

I hereby agree and sign off to the above statement	Name: Chuck Terhune Title: Program Manager Email: <a href="mailto:chuck.terhune@tetrattech.com">chuck.terhune@tetrattech.com</a> Date: 10/25/2024
--	--



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QUESTIONS, Page 3

Action 464074

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 464074
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Site Characterization</b>	
<i>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.</i>	
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	Estimate or Other
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (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 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

<b>Remediation Plan</b>	
<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>	
Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
<b>Soil Contamination Sampling:</b> (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	13300
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	12062
GRO+DRO (EPA SW-846 Method 8015M)	9512
BTEX (EPA SW-846 Method 8021B or 8260B)	0.8
Benzene (EPA SW-846 Method 8021B or 8260B)	0
<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>	
On what estimated date will the remediation commence	11/26/2024
On what date will (or did) the final sampling or liner inspection occur	05/02/2025
On what date will (or was) the remediation complete(d)	01/16/2025
What is the estimated surface area (in square feet) that will be reclaimed	6000
What is the estimated volume (in cubic yards) that will be reclaimed	600
What is the estimated surface area (in square feet) that will be remediated	6500
What is the estimated volume (in cubic yards) that will be remediated	600
<i>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.</i>	
<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 4

Action 464074

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 464074
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<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>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	HALFWAY DISPOSAL AND LANDFILL [FEEM0112334510]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> 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: <a href="mailto:chuck.terhune@tetrattech.com">chuck.terhune@tetrattech.com</a> Date: 05/19/2025
<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 464074

**QUESTIONS (continued)**

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	Action Number: 464074
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

<b>Deferral Requests Only</b>	
<i>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.</i>	
Requesting a deferral of the remediation closure due date with the approval of this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	Two heater treaters and piping manifolds, an air compressor, a power pole, and aboveground piping footings prevent access to remaining impacts at the site within the upper 4 feet beneath the heater treaters and within the upper 2 feet beneath the power pole, pipe footings, and compressor. To access these areas, the heater treaters would need to be removed along with piping, the compressor, and the pipe footings, constituting a major deconstruction of the facility.
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	650
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	87
<i>Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.</i>	
Enter the facility ID (f#) on which this deferral should be granted	EMERALD FEDERAL BATTERY [fAPP2212326602]
Enter the well API (30-) on which this deferral should be granted	Not answered.
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
<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: <a href="mailto:chuck.terhune@tetrattech.com">chuck.terhune@tetrattech.com</a> Date: 05/19/2025



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QUESTIONS, Page 6

Action 464074

**QUESTIONS (continued)**

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 464074
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	457066
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/02/2025
What was the (estimated) number of samples that were to be gathered	4
What was the sampling surface area in square feet	800

**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	No
--	----



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CONDITIONS

Action 464074

CONDITIONS

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 464074
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
scwells	Deferral approved. Deferral of BH-24, BH-27, BH-28, BH-62, BH-63, SW-12, SW-13, SW-14, SW-15, SW-22, SW-23, SW-24, SW-26, SW-30, and SW-31 is approved until plugging and abandonment or a major facility deconstruction, whichever comes first. A complete and accurate remediation report and/or reclamation report will need to be submitted at that time.	5/30/2025
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 the 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. Sampling notifications were not submitted for confirmation samples that were collected on 1/6 and 1/8/25.	5/30/2025
scwells	For future releases at this site, the minimum distance to the following should be updated: 100-year floodplain (1-5 miles to W).	5/30/2025