TETRA TECH

August 14, 2024

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

Re: Site Assessment Report and Closure Request
Maverick Permian, LLC
Leamex #015
Unit Letter H, Section 16, Township 17 South, Range 33 East
Lea County, New Mexico
Incident ID# nPRS0520747681

Dear Sir or Madam,

Tetra Tech, Inc. (Tetra Tech) was contracted by Maverick Permian, LLC (Maverick) to assess a release that occurred from an internal corrosion of the flow line associated with the Leamex #015. The release footprint is located in Public Land Survey System (PLSS) Unit Letter H, Section 16, Township 17 South, Range 33 East, in Lea County, New Mexico (Site). The approximate release point was reported at coordinates 32.8364906°, -103.6621323° as shown in **Figure 1** and **Figure 2**.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report, the release was discovered on March 16, 2005. The C-141 reports that the release occurred due to an internal corrosion of the flow line leading to a 15-barrel (bbl) spill of crude oil and produced water. Approximately 1 bbl of crude oil was reported as recovered by a vac-truck during the initial response. The NMOCD received the Initial C-141 on July 26, 2005, and subsequently assigned the release Incident ID nPRS0520747681. The C-141 submission narrative states the following:

> *"C-141: "The spill was a flow line leak caused by internal corrosion. The contaminated soil at the spill site will be removed and clean soil will be used to fill the area, which will then be seeded. 40'x200', 100'x2', 110'x1' of damp caliche rock/ black dirt with no cows present. Picked up free fluid & spread red sand to soak up remaining oil. See attachment for further details." Psheeley- a composite sample of unknown collection points was tested…Chloride=1900, DRO=324. No GRO or BTEX was detected above lab detection limits."*

The initial C-141 Release notification form is available from the NMOCD Permitting portal under incident nPRS0520747681.

Tetra Tech, Inc.
1500 CityWest Boulevard, Suite 1000, Houston, Texas 77042
Tel +1.832.251.5160 | tetratech.com/oga | tetratech.com

SITE CHARACTERIZATION

Tetra Tech performed a Site characterization that included identifying sensitive receptors, determining the depth of groundwater, and assessing the site soils. The Site Characterization data are included in **Attachment 1**.

Site Characterization Summary

Shallowest depth to groundwater beneath the area affected by the release	Greater than 55 feet bgs
Method used to determine the depth to groundwater	Estimate
Did this release impact groundwater or surface water?	No
The minimum distance between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 miles
Any lakebed, sinkhole, or playa lake	Between 1000 ft and ½ mi.
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 mi.
A spring or private domestic freshwater well used by less than five households for domestic or stock watering purposes	Between 1 and 5 mi.
Any other freshwater well or spring	Between 1 and 5 mi.
Incorporated municipal boundaries or a defined municipal freshwater well field	Greater than 5 mi.
A wetland	Between 1000 ft and ½ mi.
A subsurface mine	Greater than 5 mi.
A (non-karst) unstable area	Greater than 5 mi.
Categorized 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?	No

Receptors

Tetra Tech identified no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains within the distances specified in 19.15.29 New Mexico Administrative Code (NMAC). According to the NMOCD Oil and Gas Map online, the Site has low karst potential.

Depth to Groundwater

According to the New Mexico Office of State Engineers' (NMOSE) Reporting System, no water wells exist within ½ miles of the Site. Based on available information from water wells within 2 miles to the north, south, east, and west, the depth to water is estimated at greater than 100 feet below the ground surface at the site.

Soils

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), the Site is mapped as Kimbrough-Lea complex, dry, 0 to 3 percent slopes.

- Loam from 0 to 18 inches;
- Gravelly Fine Sandy Loam from 18 to 26 inches; and
- Cemented Material from 26 to 80 inches.

REGULATORY FRAMEWORK

Based upon the release footprint location and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action levels (RRALs) for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), Total Petroleum Hydrocarbons (TPH), and chloride in soil.

Based on the site characterization and in accordance with Table I of 19.15.29.12 NMAC, the Remediation RRALs for the Site for groundwater not proven to be greater than 51 feet bgs are as follows:

Reclamation Requirements

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

SITE ASSESSMENT

Historic Aerial Review

Tetra Tech reviewed the site's available Google Earth historical aerial images, from before the recorded release date to the most currently available images, including images from 1996, 2005, 2009, 2011, 2012, 2014, 2017, 2019, and 2023. The aerial images did not show evidence of the release related to incident nPRS0520747681. The August 2011 image shows an approximately 6,000 square-foot brown area in the pasture approximately 550 feet southeast of the reported release location, indicative of a remediation excavation that occurred sometime after August 2009. The 2012 aerial image shows this area more clearly, with lineations indicative of heavy equipment traffic and an apparent depression left behind. The area revegetation is apparent in subsequent aerial images **Attachment 2** provides the reviewed historical aerial images of the Site.

Sampling Notification

Based on the historical aerial review, the release age, and the initial C-141 release narrative, Maverick believes that the release Site may meet remediation closure standards during delineation activities and desires to use the delineation samples for remediation closure.

The New Mexico Energy, minerals, and Natural Resources Department (EMNRD) Notice: *Process Updates Re: Submission of Form C-141 Release Notification and Corrective Actions*, dated December 1, 2023, states the

below under the Frequently Asked Questions VIII. Remediation Closure Sampling Notice & Liner Inspection Notices:

> *"If a responsible party determines the release site may meet remediation closure standards during delineation activities and wish to use those samples for remediation closure, the responsible party must provide proper two (2) business day notice to the OCD pursuant to 19.15.29.12 NMAC."*

Therefore, on June 19, 2024, Tetra Tech submitted the Assessment Sampling C-141N Notification of Sampling Application to the NMOCD via permitting at least two business days in advance for sampling on June 21, 2024. Sampling was delayed by one day, and samples were collected on June 22, 2024.

Site Assessment Sampling Plan

To assess the historical incident at the Site, where no visible evidence in desktop aerial reviews or site inspections was evidently associated with the incident, Tetra Tech developed a sampling plan to cover an 800-square-foot area around the release coordinates, including four (4) sampling locations with two soil samples collected from each location. The four sample locations were selected to ensure each sample represented a 200-square-foot area near the reported release location at the given sampling depth.

Site Assessment Sampling

On June 22, 2024, Tetra Tech personnel mobilized to the Site to conduct soil sampling to delineate the release extent and confirm the efficacy of the reported remediation activities conducted during the initial response. A total of 4 hand auger borings were installed to achieve horizontal delineation of the release. Hand auger borings (BH-1 through BH-4) were installed along the perimeter of the reported release extent to depths of 2.5-feet bgs where hand auger refusal was encountered. Assessment sampling locations and depths were selected to delineate any impacts near the reported release coordinates vertically and horizontally. Soil Assessment boring locations are detailed in **Table 1** and depicted in **Figure 2**.

Recently, Tetra Tech was advised that the NMOCD will require sample collection times to be documented on chain-of-custody documentation. Tetra Tech received this feedback from the NMOCD for the first time on August 5, 2024. Tetra Tech conducted this sampling before receiving feedback regarding sample time documentation, and therefore, sample times have not been recorded for submitted samples.

Site Assessment Sampling Results

Table 2 summarizes the results from the June 22, 2024, soil sampling event. The laboratory reported concentrations of BTEX, TPH, and chloride less than the Reclamation Requirements in samples BH-1, BH-2, BH-3, and BH-4.

CONCLUSION

Based on the historical review and Site Assessment sampling, no BTEX, TPH, or chloride impacts from the historic release were identified at the Site. Based on the published soil profile identifying shallow low transmissivity lithified material encountered by Tetra Tech at approximately 2.5 feet bgs, it is unlikely that deeper impacts would be present that would not be present within the shallower higher permeability material at the Site. Therefore, No Site remediation is required, and Maverick requests closure of Incident nPRS0520747681. Reclamation and revegetation of the well pad will be conducted at the end of the life of the Leamex #015 well.is complete. If you have any questions concerning the Site's remediation activities, please email Charles Terhune at Chuck.Terhune@tetratech.com or by phone at (832) 252-2093.

Sincerely,

Chris Straub
Project Manager
Tetra Tech, Inc.

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

cc: Bryce Wagoner, Maverick Permian, LLC
New Mexico State Land Office

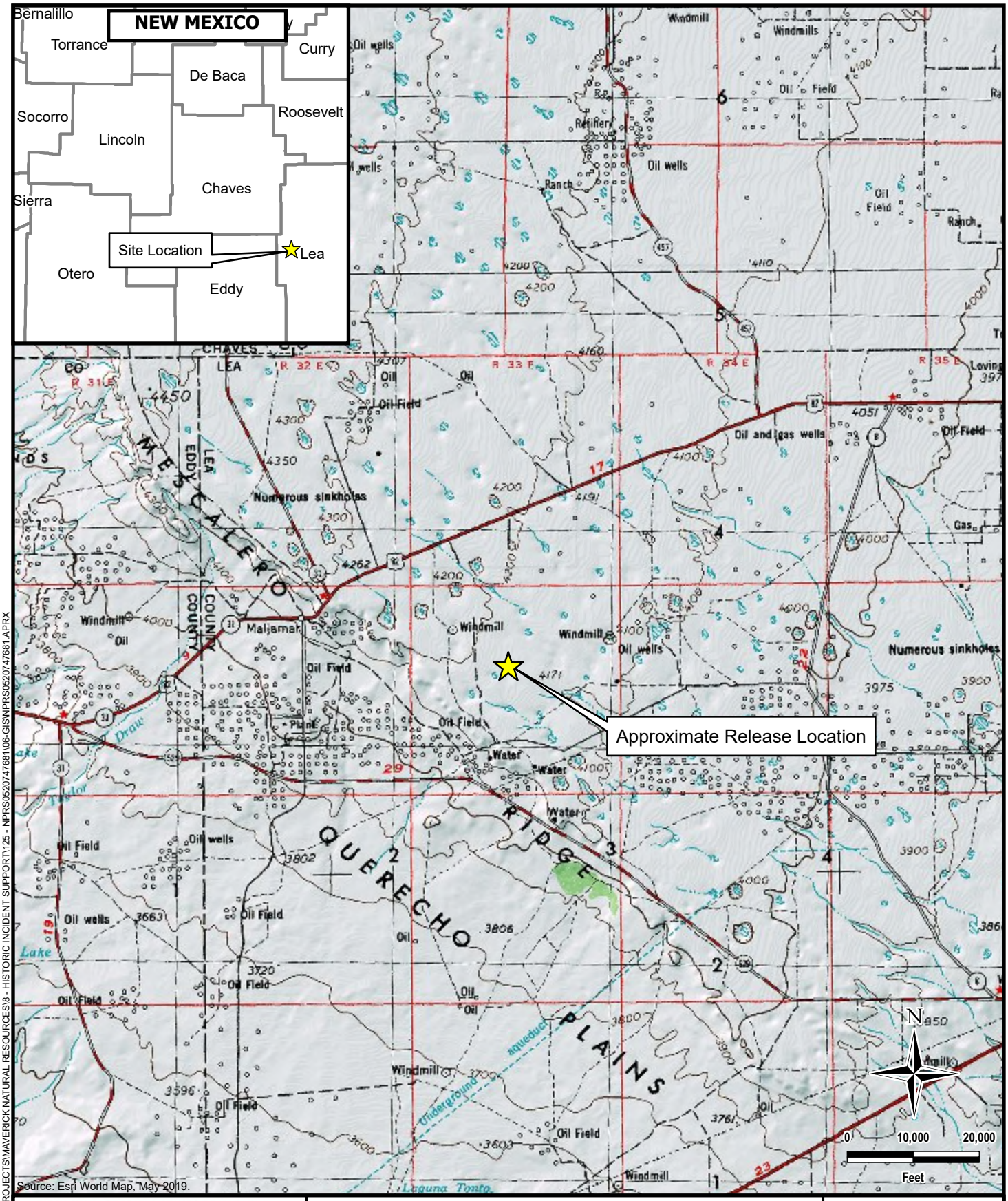
LIST OF ATTACHMENTS

Figures

Tables

Attachments

FIGURES



DOCUMENT PATH: S:\NEW PROJECTS\MAVERICK NATURAL RESOURCES\6 - HISTORIC INCIDENT SUPPORT\125 - NPRS0520747681\06-GIS\NPRS0520747681.APRX

MAVERICK NATURAL RESOURCES

TETRA TECH

OVERVIEW MAP

nPRS0520747681

LEAMEX #015

(32.836491°, -103.662132°)

LEA COUNTY, NEW MEXICO

Figure No.

1

PROJECT NO.: 212C-MD-03514

DATE: 7/17/2024

DESIGNED BY: ACP

Source: Esri World Map, May 2019.

DOCUMENT PATH: S:\NEW PROJECTS\MAVERICK NATURAL RESOURCES\8 - HISTORIC INCIDENT SUPPORT\125 - NPRS0520747681\06-GIS\NPRS0520747681.APRX

MAVERICK NATURAL RESOURCES

TETRA TECH

SITE DETAIL MAP

nPRS0520747681

LEAMEX #015

(32.836491°, -103.662132°)

LEA COUNTY, NEW MEXICO

Figure No.

2

PROJECT NO.:	212C-MD-03514
DATE:	7/17/2024
DESIGNED BY:	ACP

TABLES

TETRA TECH

TABLE 1
SOIL ASSESSMENT LOCATIONS
INCIDENT ID nPRS0520747681
MAVERICK PERMIAN, LLC
LEAMEX #015
LEA COUNTY, NEW MEXICO

Boring ID	Date	Latitude	Longitude
BH-01	6/22/2024	32.836485	-103.662127
BH-02	6/22/2024	32.836517	-103.662127
BH-03	6/22/2024	32.836464	-103.662154
BH-04	6/22/2024	32.836459	-103.662112

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SHALLOW SOIL CONFIRMATION SAMPLING - INCIDENT ID nPRS0520747681
MAVERICK PERMIAN, LLC
LEAMEX #015
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride[1]		BTEX[2]								TPH[3]							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO C_6 - C_{10}		DRO > C_{10} - C_{28}		EXT DRO > C_{28} - C_{36}		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**		**10**						**100**
BH - 1 (0-0.5')	6/22/2024	0 - 0.5	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30
BH - 1 (2-2.5')	6/22/2024	2 - 2.5	160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30
BH - 2 (0-0.5')	6/22/2024	0 - 0.5	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30
BH - 2 (2-2.5')	6/22/2024	2 - 2.5	160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30
BH - 3 (0-0.5')	6/22/2024	0 - 0.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30
BH - 3 (2-2.5')	6/22/2024	2 - 2.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30
BH - 4 (0-0.5')	6/22/2024	0 - 0.5	112		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30
BH - 4 (2-2.5')	6/22/2024	2 - 2.5	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<30

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

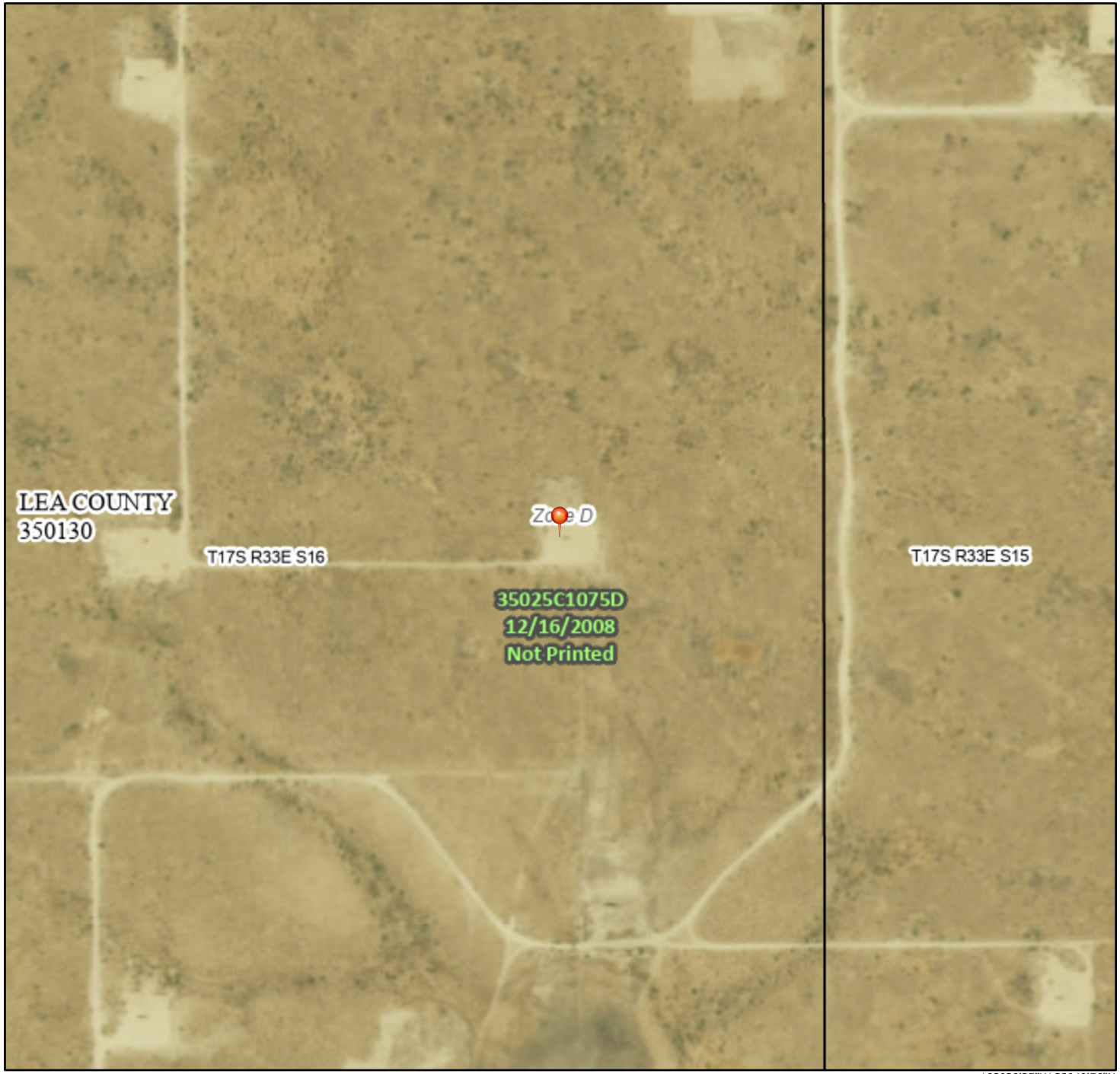
Bold and highlighted values indicate exceedance of Reclamation Requirements (19.15.29 NMAC).

ATTACHMENT 1 – SITE CHARACTERIZATION DATA

National Flood Hazard Layer FIRMette

FEMA

103°40'2"W 32°50'26"N



103°39'25"W 32°49'56"N

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

1:6,000

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
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

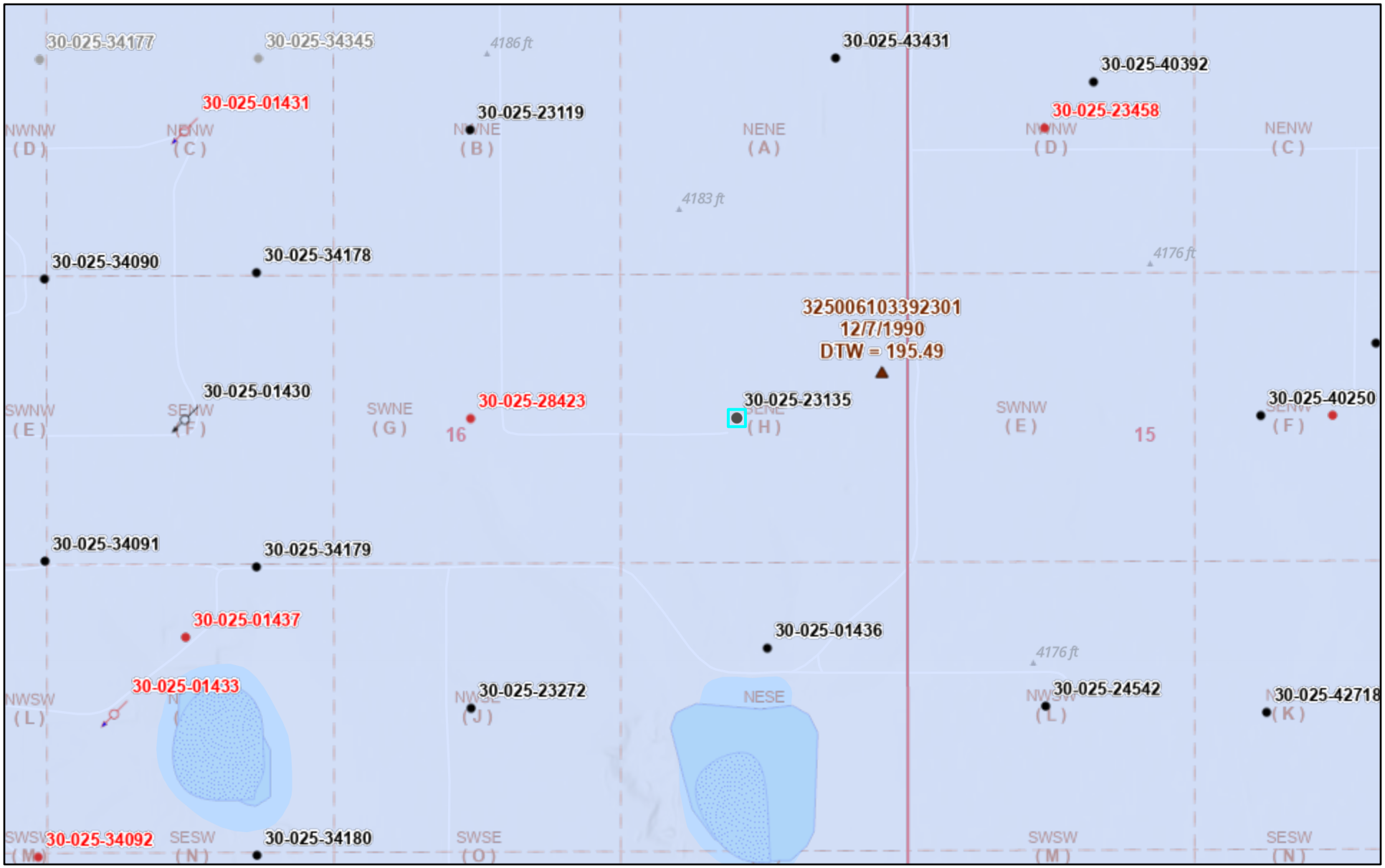
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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 6/6/2024 at 5:03 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.

OCD Well Locations



7/31/2024, 11:10:55 AM

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Wells - Large Scale

- Oil, Active
- Oil, Cancelled
- Oil, Plugged
- Injection, Active
- Injection, Plugged
- USGS Historical GW Wells

Karst Occurrence Potential

- Low
- OSW Water Bodys
- OSE Probable Playas
- PLSS Second Division
- PLSS First Division

BLM, OCD, New Mexico Tech, Esri, NASA, NGA, USGS, FEMA, Oil Conservation Division of the New Mexico Energy, Minerals and Natural

New Mexico Oil Conservation Division

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

U.S. Fish and Wildlife Service
National Wetlands Inventory

LEAMEX #015 - nPRS0520747681

June 6, 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 Wetlands Inventory (NWI)
This page was produced by the NWI mapper

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

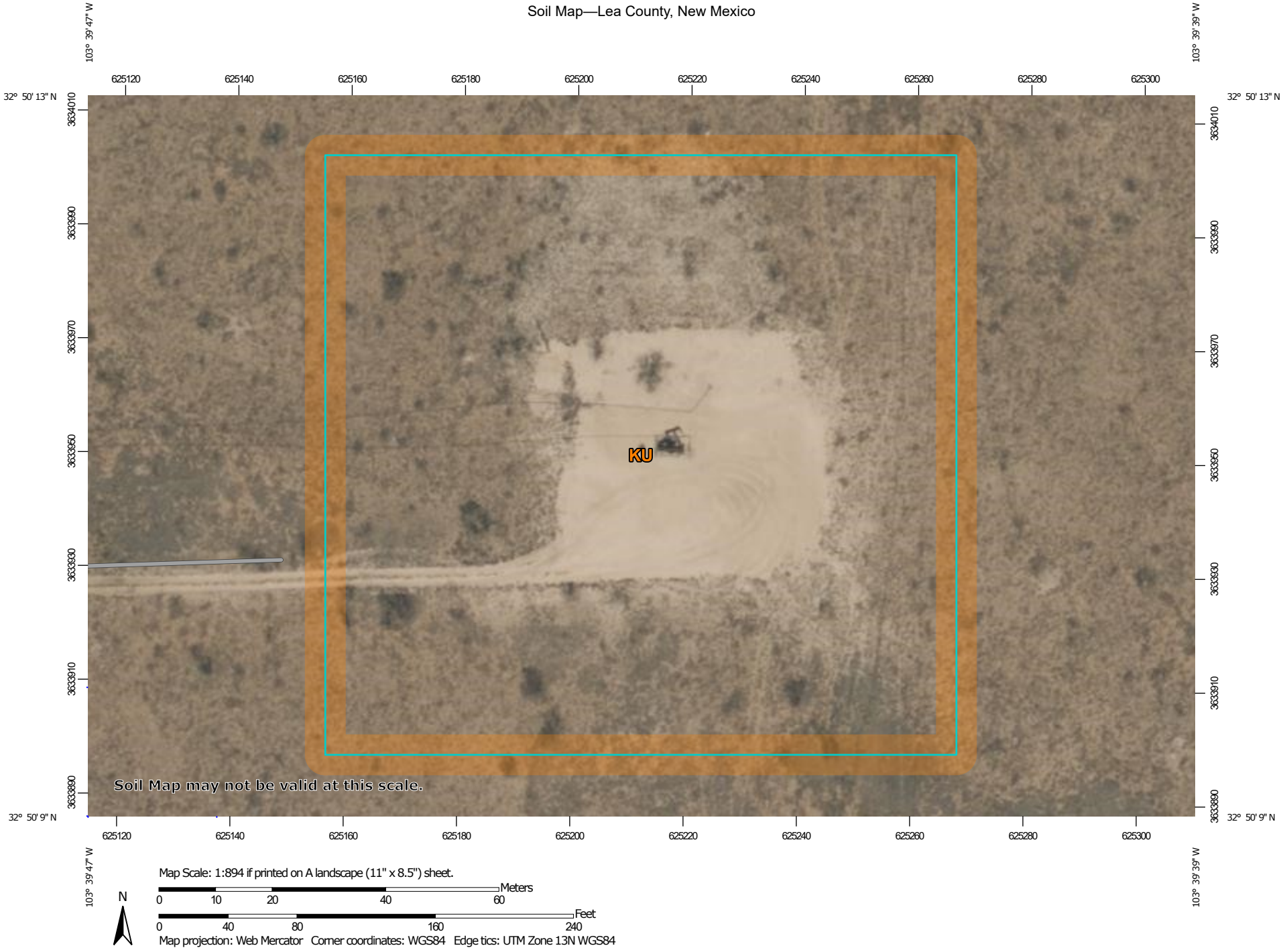
No report data available.

Basin/County Search:
Basin: L
County: LE

UTM Filters (in meters):
Easting: 625212.766
Northing: 3633953.292
Radius: 800

*** UTM location was derived from PLSS - see Help**

Soil Map—Lea County, New Mexico



Map Scale: 1:894 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 10 20 40 60

Feet
0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

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 20, Sep 6, 2023

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
KU	Kimbrough-Lea complex, dry, 0 to 3 percent slopes	2.9	100.0%
Totals for Area of Interest		**2.9**	**100.0%**

Lea County, New Mexico

KU—Kimbrough-Lea complex, dry, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tw46
Elevation: 2,500 to 4,800 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 57 to 63 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Kimbrough and similar soils: 45 percent
Lea and similar soils: 25 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kimbrough

Setting

Landform: Playa rims, plains
Down-slope shape: Convex, linear
Across-slope shape: Concave, linear
Parent material: Loamy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 3 inches: gravelly loam
Bw - 3 to 10 inches: loam
Bkkm1 - 10 to 16 inches: cemented material
Bkkm2 - 16 to 80 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 4 to 18 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 95 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R077DY049TX - Very Shallow 12-17" PZ
Hydric soil rating: No

Description of Lea

Setting

Landform: Plains
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Calcareous, loamy eolian deposits from the blackwater draw formation of pleistocene age over indurated caliche of pliocene age

Typical profile

A - 0 to 10 inches: loam
Bk - 10 to 18 inches: loam
Bkk - 18 to 26 inches: gravelly fine sandy loam
Bkkm - 26 to 80 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 22 to 30 inches to petrocalcic
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 90 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 3.0
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: R077DY047TX - Sandy Loam 12-17" PZ
Hydric soil rating: No

Minor Components

Kenhill

Percent of map unit: 12 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R077DY038TX - Clay Loam 12-17" PZ
Hydric soil rating: No

Douro

Percent of map unit: 12 percent
Landform: Plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R077DY047TX - Sandy Loam 12-17" PZ
Other vegetative classification: Unnamed (G077DH000TX)
Hydric soil rating: No

Spraberry

Percent of map unit: 6 percent
Landform: Playa rims, plains
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: R077DY049TX - Very Shallow 12-17" PZ
Other vegetative classification: Unnamed (G077DH000TX)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 20, Sep 6, 2023

ATTACHMENT 2 – PHOTOGRAPHIC DOCUMENTATION

nPRS0520747681

Leamex #015
Historical Aerial Image
1996

Legend

nPRS0520747681 Release Location

nPRS0520747681 Release Location

Google Earth

Image U.S. Geological Survey

N

100 ft

nPRS0520747681

Leamex #015
Historical Aerial Image
2005

Legend

- nPRS0520747681 Release Location

nPRS0520747681

Leamex #015
Historical Aerial Image
2009

Legend

nPRS0520747681 Release Location

nPRS0520747681 Release Location

Google Earth

Image USDA/FPAC/GEO

N

100 ft

nPRS0520747681

Leamex #015
Historical Aerial Image
2011

Legend

nPRS0520747681 Release Location

nPRS0520747681 Release Location

Google Earth

Image USDA/FPAC/GEO

N

100 ft

nPRS0520747681

Leamex #015
Historical Aerial Image
2012

Legend

nPRS0520747681 Release Location

nPRS0520747681

Leamex #015
Historical Aerial Image
2014

Legend

nPRS0520747681 Release Location

nPRS0520747681

Leamex #015
Historical Aerial Image
2017

Legend

nPRS0520747681 Release Location

nPRS0520747681

Leamex #015
Historical Aerial Image
2019

Legend

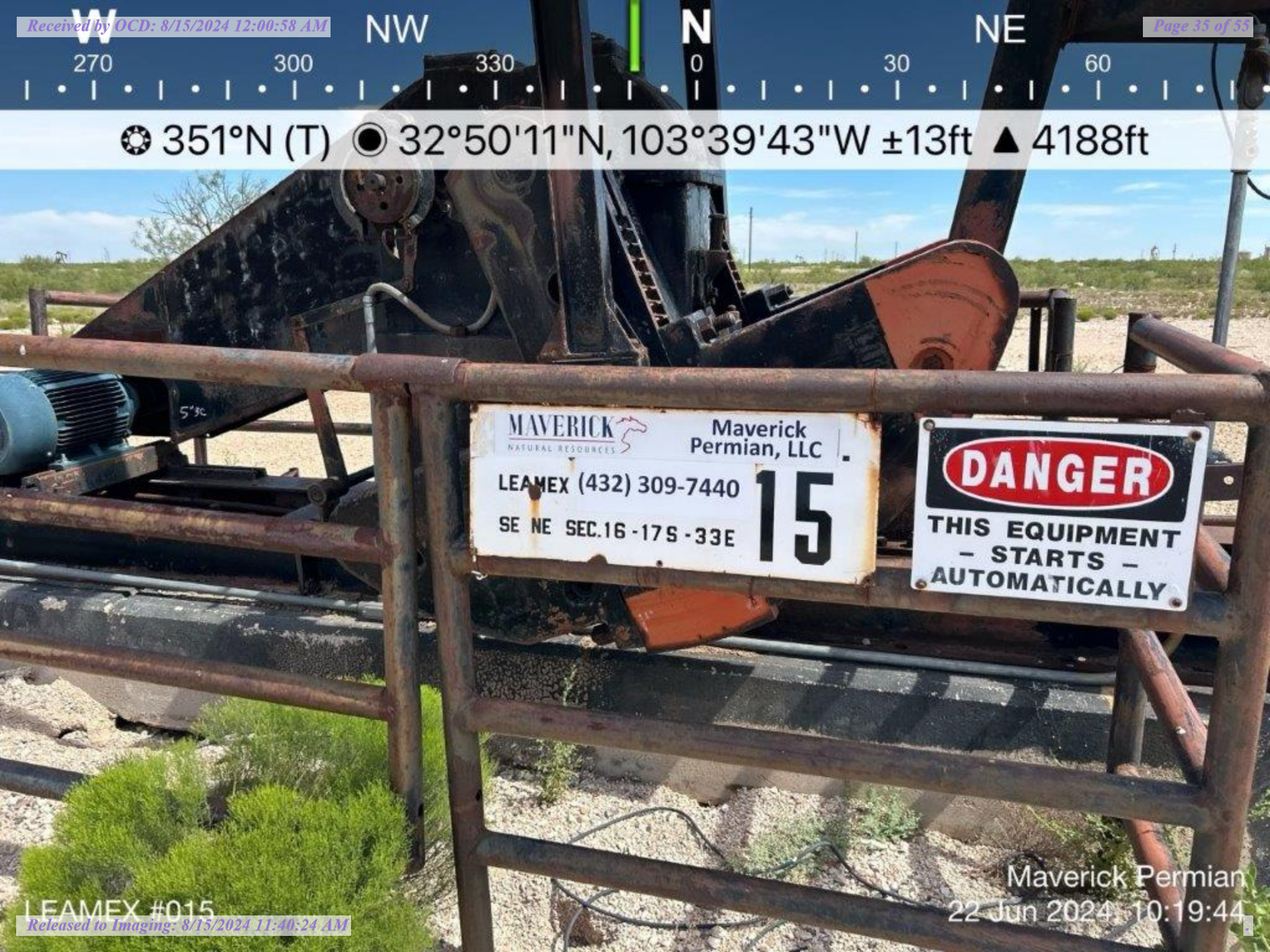
nPRS0520747681 Release Location

nPRS0520747681

Leamex #015
Historical Aerial Image
2023

Legend

nPRS0520747681 Release Location



ATTACHMENT 3 – LABORATORY ANALYTICAL DATA

CARDINAL Laboratories

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

June 30, 2024

CHRIS STRAUB

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: LEAMEX #015

Enclosed are the results of analyses for samples received by the laboratory on 06/24/24 8:57.

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

Cardinal Laboratories is accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/24/2024	Sampling Date:	06/22/2024
Reported:	06/30/2024	Sampling Type:	Soil
Project Name:	LEAMEX #015	Sampling Condition:	Cool & Intact
Project Number:	nPRS0520747681	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY		

Sample ID: BH 1 (0-0.5') (H243721-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2024	ND	1.98	99.0	2.00	1.79	
Toluene*	<0.050	0.050	06/29/2024	ND	2.19	109	2.00	0.275	
Ethylbenzene*	<0.050	0.050	06/29/2024	ND	2.26	113	2.00	0.0662	
Total Xylenes*	<0.150	0.150	06/29/2024	ND	6.98	116	6.00	0.424	
Total BTEX	<0.300	0.300	06/29/2024	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	**48.0**	16.0	06/28/2024	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	06/27/2024	ND	172	86.1	200	0.398	
DRO >C10-C28*	<10.0	10.0	06/27/2024	ND	203	102	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	06/27/2024	ND					

Surrogate: 1-Chlorooctane *66.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *64.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/24/2024	Sampling Date:	06/22/2024
Reported:	06/30/2024	Sampling Type:	Soil
Project Name:	LEAMEX #015	Sampling Condition:	Cool & Intact
Project Number:	nPRS0520747681	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY		

Sample ID: BH 1 (2-2.5') (H243721-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2024	ND	1.98	99.0	2.00	1.79	
Toluene*	<0.050	0.050	06/29/2024	ND	2.19	109	2.00	0.275	
Ethylbenzene*	<0.050	0.050	06/29/2024	ND	2.26	113	2.00	0.0662	
Total Xylenes*	<0.150	0.150	06/29/2024	ND	6.98	116	6.00	0.424	
Total BTEX	<0.300	0.300	06/29/2024	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	**160**	16.0	06/28/2024	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	06/27/2024	ND	172	86.1	200	0.398	
DRO >C10-C28*	<10.0	10.0	06/27/2024	ND	203	102	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	06/27/2024	ND					

Surrogate: 1-Chlorooctane *96.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/24/2024	Sampling Date:	06/22/2024
Reported:	06/30/2024	Sampling Type:	Soil
Project Name:	LEAMEX #015	Sampling Condition:	Cool & Intact
Project Number:	nPRS0520747681	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY		

Sample ID: BH 2 (0-0.5') (H243721-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/29/2024	ND	1.98	99.0	2.00	1.79	
Toluene*	<0.050	0.050	06/29/2024	ND	2.19	109	2.00	0.275	
Ethylbenzene*	<0.050	0.050	06/29/2024	ND	2.26	113	2.00	0.0662	
Total Xylenes*	<0.150	0.150	06/29/2024	ND	6.98	116	6.00	0.424	
Total BTEX	<0.300	0.300	06/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *118 %* *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	**96.0**	16.0	06/28/2024	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	06/27/2024	ND	172	86.1	200	0.398	
DRO >C10-C28*	<10.0	10.0	06/27/2024	ND	203	102	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	06/27/2024	ND					

Surrogate: 1-Chlorooctane *75.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *73.6 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/24/2024	Sampling Date:	06/22/2024
Reported:	06/30/2024	Sampling Type:	Soil
Project Name:	LEAMEX #015	Sampling Condition:	Cool & Intact
Project Number:	nPRS0520747681	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY		

Sample ID: BH 2 (2-2.5') (H243721-04)

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	06/29/2024	ND	1.98	99.0	2.00	1.79	
Toluene*	<0.050	0.050	06/29/2024	ND	2.19	109	2.00	0.275	
Ethylbenzene*	<0.050	0.050	06/29/2024	ND	2.26	113	2.00	0.0662	
Total Xylenes*	<0.150	0.150	06/29/2024	ND	6.98	116	6.00	0.424	
Total BTEX	<0.300	0.300	06/29/2024	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	**160**	16.0	06/28/2024	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	06/27/2024	ND	172	86.1	200	0.398	
DRO >C10-C28*	<10.0	10.0	06/27/2024	ND	203	102	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	06/27/2024	ND					

Surrogate: 1-Chlorooctane *97.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *97.6 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/24/2024	Sampling Date:	06/22/2024
Reported:	06/30/2024	Sampling Type:	Soil
Project Name:	LEAMEX #015	Sampling Condition:	Cool & Intact
Project Number:	nPRS0520747681	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY		

Sample ID: BH 3 (0-0.5') (H243721-05)

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	06/29/2024	ND	1.98	99.0	2.00	1.79	
Toluene*	<0.050	0.050	06/29/2024	ND	2.19	109	2.00	0.275	
Ethylbenzene*	<0.050	0.050	06/29/2024	ND	2.26	113	2.00	0.0662	
Total Xylenes*	<0.150	0.150	06/29/2024	ND	6.98	116	6.00	0.424	
Total BTEX	<0.300	0.300	06/29/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *119 %* *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	06/28/2024	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	06/27/2024	ND	172	86.1	200	0.398	
DRO >C10-C28*	<10.0	10.0	06/27/2024	ND	203	102	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	06/27/2024	ND					

Surrogate: 1-Chlorooctane *96.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/24/2024	Sampling Date:	06/22/2024
Reported:	06/30/2024	Sampling Type:	Soil
Project Name:	LEAMEX #015	Sampling Condition:	Cool & Intact
Project Number:	nPRS0520747681	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY		

Sample ID: BH 3 (2-2.5') (H243721-06)

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	06/29/2024	ND	1.98	99.0	2.00	1.79	
Toluene*	<0.050	0.050	06/29/2024	ND	2.19	109	2.00	0.275	
Ethylbenzene*	<0.050	0.050	06/29/2024	ND	2.26	113	2.00	0.0662	
Total Xylenes*	<0.150	0.150	06/29/2024	ND	6.98	116	6.00	0.424	
Total BTEX	<0.300	0.300	06/29/2024	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	06/28/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/27/2024	ND	172	86.1	200	0.398	
DRO >C10-C28*	<10.0	10.0	06/27/2024	ND	203	102	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	06/27/2024	ND					

Surrogate: 1-Chlorooctane *95.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/24/2024	Sampling Date:	06/22/2024
Reported:	06/30/2024	Sampling Type:	Soil
Project Name:	LEAMEX #015	Sampling Condition:	Cool & Intact
Project Number:	nPRS0520747681	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY		

Sample ID: BH 4 (0-0.5') (H243721-07)

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	06/29/2024	ND	1.98	99.0	2.00	1.79	
Toluene*	<0.050	0.050	06/29/2024	ND	2.19	109	2.00	0.275	
Ethylbenzene*	<0.050	0.050	06/29/2024	ND	2.26	113	2.00	0.0662	
Total Xylenes*	<0.150	0.150	06/29/2024	ND	6.98	116	6.00	0.424	
Total BTEX	<0.300	0.300	06/29/2024	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	06/28/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/27/2024	ND	172	86.1	200	0.398	
DRO >C10-C28*	<10.0	10.0	06/27/2024	ND	203	102	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	06/27/2024	ND					

Surrogate: 1-Chlorooctane *91.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *90.0 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	06/24/2024	Sampling Date:	06/22/2024
Reported:	06/30/2024	Sampling Type:	Soil
Project Name:	LEAMEX #015	Sampling Condition:	Cool & Intact
Project Number:	nPRS0520747681	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY		

Sample ID: BH 4 (2-2.5') (H243721-08)

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	06/29/2024	ND	1.98	99.0	2.00	1.79	
Toluene*	<0.050	0.050	06/29/2024	ND	2.19	109	2.00	0.275	
Ethylbenzene*	<0.050	0.050	06/29/2024	ND	2.26	113	2.00	0.0662	
Total Xylenes*	<0.150	0.150	06/29/2024	ND	6.98	116	6.00	0.424	
Total BTEX	<0.300	0.300	06/29/2024	ND					

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

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	06/28/2024	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/27/2024	ND	172	86.1	200	0.398	
DRO >C10-C28*	<10.0	10.0	06/27/2024	ND	203	102	200	1.94	
EXT DRO >C28-C36	<10.0	10.0	06/27/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *102 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Tetra Tech
Project Manager:	Chris Straub
Address:	
City: Midland	State: TX Zip:
Phone #:	Fax #:
Project #: nRS05207476 81	Project Owner:
Project Name: Leamex #015	
Project Location: Lea County	
Sampler Name: Guillermo Sanchez	

BILL TO

P.O. #:	
Company: Tetra Tech	
Attn:	
Address:	
City:	
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

BTEX | TPH (DRO / GRO / ORO) | Chloride 4500

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME
H243721-1	BH1 (0-0.5')					X					X		6/22	
2	BH1 (2-2.5')													
3	BH2 (0-0.5')													
4	BH2 (2-2.5')													
5	BH3 (0-0.5')													
6	BH3 (2-2.5')													
7	BH4 (0-0.5')													
8	BH4 (2-2.5')													

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

Relinquished By: Guillermo Sanchez	Date: 6.24.24 Time: 0857	Received By: S Rodriguez	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 1.3 Corrected Temp. °C	Sample Condition Cool: Yes / No Intact: Yes / No	CHECKED BY: (Initials) SR
Turnaround Time: Standard ☑ Rush ☐	Thermometer ID #140 Correction Factor 0°C	Bacteria (only) Sample Condition Cool: Yes / No Intact: Yes / No Observed Temp. °C Corrected Temp. °C	

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

FORM-006 R 3.4 07/11/23

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

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

QUESTIONS

Action 373750

QUESTIONS

Operator: Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 331199
	Action Number: 373750
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nPRS0520747681**
Incident Name	**NPRS0520747681 LEAMEX #015 @ 30-025-23135**
Incident Type	**Oil Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-025-23135] LEAMEX #015**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	LEAMEX #015
Date Release Discovered	03/16/2005
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil 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: Corrosion | Flow Line - Production | Crude Oil | Released: 14 BBL | Recovered: 1 BBL | Lost: 13 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion | Flow Line - Production | Produced Water | Released: 1 BBL | Recovered: 0 BBL | Lost: 1 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 (continued)

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QUESTIONS

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

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: Chuck Terhune Title: Program Manager Email: chuck.terhune@tetratech.com Date: 07/10/2024

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QUESTIONS (continued)

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QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Estimate or Other
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	160
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0
GRO+DRO (EPA SW-846 Method 8015M)	0
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	06/22/2024
On what date will (or did) the final sampling or liner inspection occur	06/22/2024
On what date will (or was) the remediation complete(d)	06/22/2024
What is the estimated surface area (in square feet) that will be reclaimed	0
What is the estimated volume (in cubic yards) that will be reclaimed	0
What is the estimated surface area (in square feet) that will be remediated	0
What is the estimated volume (in cubic yards) that will be remediated	0
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

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	Action Number: 373750
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	Yes
Other Non-listed Remedial Process. Please specify	Historical incident reviews, aerial photo reviews, and Site assessment sampling indicate no impacts at the site above reclamation requirements, therefore no remediation is warranted at the site.
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	

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

I hereby agree and sign off to the above statement	Name: Chuck Terhune Title: Program Manager Email: chuck.terhune@tetratech.com Date: 08/14/2024

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS (continued)

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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

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	Action Number: 373750
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QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**355940**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**06/21/2024**
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	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	0
What was the total volume (cubic yards) remediated	0
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	0
What was the total volume (in cubic yards) reclaimed	0
Summarize any additional remediation activities not included by answers (above)	No remediation or reclamation was conducted, Site assessment sampling indicates no impacts at the reported release location in association with this incident.

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

I hereby agree and sign off to the above statement	Name: Chuck Terhune Title: Program Manager Email: chuck.terhune@tetratech.com Date: 08/14/2024

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QUESTIONS (continued)

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QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 373750

CONDITIONS

Operator:	OGRID:
Maverick Permian LLC 1000 Main Street, Suite 2900 Houston, TX 77002	331199
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CONDITIONS

Created By	Condition	Condition Date
crystal.walker	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	8/15/2024