

***** LIQUID SPILLS - VOLUME CALCULATIONS *****

Location of spill: Black River

Date of Spill: _____

Site Soil Type: _____

Average Daily Production: _____ BBL Oil _____ BBL Water

Total Area Calculations

Total Surface Area	width		length		wet soil depth	oil (%)
Rectangle Area #1	105 ft	X	23 ft	X	9 in	0%
Rectangle Area #2	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #3	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%

Porosity 0.15 gal per gal**Saturated Soil Volume Calculations:**

		<u>H2O</u>	<u>OIL</u>
Area #1	2415 sq. ft.	1,811 cu. ft.	cu. ft.
Area #2	0 sq. ft.	cu. ft.	cu. ft.
Area #3	0 sq. ft.	cu. ft.	cu. ft.
Area #4	0 sq. ft.	cu. ft.	cu. ft.
Area #5	0 sq. ft.	cu. ft.	cu. ft.
Area #6	0 sq. ft.	cu. ft.	cu. ft.
Area #7	0 sq. ft.	cu. ft.	cu. ft.
Area #8	0 sq. ft.	cu. ft.	cu. ft.
Total Solid/Liquid Volume:	2,415 sq. ft.	1,811 cu. ft.	cu. ft.

Estimated Volumes Spilled

	<u>H2O</u>	<u>OIL</u>
Liquid in Soil:	48.4 BBL	0.0 BBL
Liquid Recovered :	80.0 BBL	0.0 BBL
Spill Liquid	128.4 BBL	0.0 BBL
Total Spill Liquid:	<u>128.4</u>	

Recovered Volumes

Estimated oil recovered: 0.0 BBL
 Estimated water recovered: 0.0 BBL

Soil Type	Porosity
Clay	0.15
Peat	0.40
Glacial Sediments	0.13
Sandy Clay	0.12
Silt	0.16
Loess	0.25
Fine Sand	0.16
Medium Sand	0.25
Coarse Sand	0.26
Gravelly Sand	0.26
Fine Gravel	0.26
Medium Gravel	0.25
Coarse Gravel	0.18
Sandstone	0.25
Siltstone	0.18
Shale	0.05
Limestone	0.13
Basalt	0.19
Volcanic Tuff	0.20
Standing Liquids	

Remediation Summary & Soil Closure Request

Permian Resources

Black River 3 Fed #1

Eddy County, New Mexico

Unit Letter N, Section 3, Township 24 South, Range 26 East

Latitude 32.242634 North, Longitude 104.284017 West

NMOCD Reference No. nMAP1827460454

Prepared By:

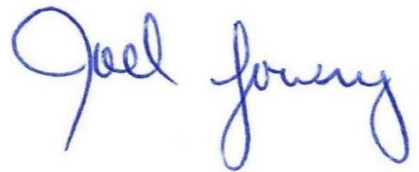
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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Permian Resources, has prepared this *Remediation Summary & Soil Closure Request* for the release site known as the Black River 3 Fed #1 (henceforth, "Site"). Details of the release are summarized below:

Location of Release Source

Latitude: 32.242634 Longitude: -104.284017

Provided GPS are in WGS84 format.

Site Name:	Black River 3 Fed #1	Site Type:	Tank Battery
Date Release Discovered:	1/3/2018	API # (if applicable):	30-015-29259

Unit Letter	Section	Township	Range	County
N	3	24S	26E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name Jerry and Betty June Lackey)

Nature and Volume of Release

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 130	Volume Recovered (bbls) 80
	Is the concentration of dissolved chloride in the produced water > 10,000 mg/L?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released	Volume/Weight Recovered

Cause of Release:

Failure of a ball valve inferred to have been caused by freezing.

Initial Response

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

Previously submitted portions of the New Mexico Oil Conservation Division (NMOCD) Form C-141 are available in the NMOCD Permitting System.

2.0 SITE CHARACTERIZATION

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (bgs)?	Between 100 and 500 (ft.)
What method was used to determine the depth to groundwater?	
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	½ to 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	½ to 1 (mi.)
An occupied permanent residence, school, hospital, institution or church?	1 to 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	½ to 1 (mi.)
Any other fresh water well or spring?	1 to 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field?	> 5 (mi.)
A wetland?	½ to 1 (mi.)
A subsurface mine?	> 5 (mi.)
A (non-karst) unstable area?	½ to 1 (mi.)
Categorize the risk of this well/site being in a karst geology.	High
A 100-year floodplain?	1 to 5 (mi.)
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the Site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

Additional NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish and Wildlife Services (FWS) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted on Figures 1, 2, 4, and 5.

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the release, inferred depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standard for the Site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
Between 100 and 500 (ft.)	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	600	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	100	100
	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	-	-
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

* Measured in milligrams per kilogram (mg/kg)
† Table I, Section 19.15.29.12 of the New Mexico Administrative Code (NMAC).
‡ The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas. Section 19.15.29.13 D.(1) NMAC.

4.0 REMEDIATION ACTIVITIES SUMMARY

Requesting a remediation plan approval with this submission?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Have the lateral and vertical extents of contamination been fully delineated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Was this release entirely contained within a lined containment area?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
On what estimated date will (or did) the remediation commence?	<u>2/5/2024</u>
On what date will (or did) the final sampling or liner inspection occur?	<u>4/18/2024</u>
On what date will (or was) the remediation complete(d)?	<u>4/29/2024</u>
What is the total surface area (sq. ft.) in need of or that will <i>eventually</i> be reclaimed?	<u>2,410</u>
What is the total volume (cy) in need of or that will <i>eventually</i> be reclaimed?	<u>60</u>
What was the total surface area (sq. ft.) that has or will be remediated?	<u>2,410</u>
What was the total volume (cy) that has or will be remediated?	<u>60</u>
This remediation utilized the following processes to remediate/reduce contaminants:	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(In Situ) Soil Vapor Extraction	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Ground Water Abatement pursuant to 19.15.30 NMAC	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Other (Non-listed remedial process)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Which OCD approved facility was or will be used for off-site disposal?	<u>R360 Red Bluff Facility</u>
NMOCD Disposal Facility ID?	<u>Texas</u>
Summarize any additional remediation activities not included by answers above.	<u>See below</u>

Beginning in August 2018, limited remediation activities were conducted by an alternative environmental contractor on behalf of Chisholm Energy Operating, LLC (Chisholm). In May 2019, Chisholm contracted Etech to prepare a *Remediation Summary and Site Closure Request*, detailing remediation activities that had been conducted to date along with laboratory analytical results from confirmation soil samples. On or around September 21, 2022, Earthstone Operating, LLC, (Earthstone) acquired the Black River 3 Federal #001. On or around October 23, 2023, Earthstone submitted the *Remediation Summary and Site Closure Request* to the NMOCD. The *Remediation Summary and Site Closure Request* was subsequently denied citing that, since there was not a signed remediation plan, remediation activities would need to follow the revised spill rule. On October 30, 2023, Permian Resources acquired Earthstone.

On January 9, 2024, Permian Resources contracted Etech to provide environmental consulting and remediation services at the Site. On February 5, 2024, Etech conducted an initial assessment. During the initial assessment, twelve (12) composite soil samples (SP 1 @ 1', SP 2 @ 5", SP 3 @ 1', SP 4 @ 1.5', SP 5 @ 1.5', SP 6 @ 1.5', SP 7 @ 1.5', EW-1, EW-2, NW-1, SW-1, WW-1 and WW-2) were collected from the floor and sidewalls of the existing open excavation. The collected soil samples, were field screened and select soil samples were submitted to a certified, commercial laboratory (henceforth, "the laboratory") for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. Analytical results indicated chloride concentrations were below the NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples with the exception of soil sample SP 3 @ 1', which exhibited a chloride concentration of 752 mg/kg. TPH concentrations were below the NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples, with the exception of soil samples EW-2 and WW-2, which exhibited TPH concentrations of 112 mg/kg and 1,520 mg/kg, respectively.

In accordance with NMOCD regulatory guidelines, impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards was excavated and stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal. Olfactory/visual senses and/or a chloride test kit were utilized to field-screen the horizontal and vertical extent of impacted soil and to guide the excavation. The sidewalls and floor of the excavation were advanced until field tests and field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards. Representative five-point composite confirmation soil samples were collected every 200 square feet from the sidewalls and floor of the excavated area to be submitted for laboratory analysis.

Between February 14 and April 18, 2024, Etech collected eleven (11) excavation confirmation soil samples (FL - 1 @ 1.5', FL - 2 @ 0.5', FL - 3 @ 0.5', FL 3A @ 1', FL - 4 @ 1.5', FL - 7 @ 0.5', FL - 8 @ 0.5', FL - 9 @ 1.5', FL - 10 @ 1.5', EW 2A and WW 2A) from the floor and sidewalls of the excavated area. The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples, with the exception of soil sample FL-3 @ 0.5' (1,500 mg/kg chloride). Impacted material in the area characterized by soil sample FL-3 @ 0.5' was excavated and resampled (FL 3A @ 1', 16.0 mg/kg chloride), as necessary. A summary of soil sampling events is provided below:

Constituent	Highest Observable Concentration (mg/kg)	Sample ID	Sample Date	Sample Depth (ft bgs)	Soil Status
Chloride	1,500	FL-3 @ 0.5'	2/14/2024	0.5	Excavated and Disposed
TPH	1,520	WW-2	2/5/2024	0-1.5	Excavated and Disposed
GRO + DRO	282	WW-2	2/5/2024	0-1.5	Excavated and Disposed
BTEX	<0.300	All Samples	Various	Various	N/A
Benzene	<0.050	All Samples	Various	Various	N/A

Please reference Table 1 for additional information.

Upon receiving laboratory analytical results from excavation confirmation soil samples, excavated areas were backfilled with locally sourced, non-impacted material characterized by composite soil sample R360 West Pit. Excavation backfill was placed at or near original relative positions. The affected areas were contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable. Affected areas not on production pads and/or lease roads will be reseeded with an agency and/or landowner-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the Site. A "Site and Sample Location Map" is provided as Figure 3. A soil chemistry table is provided as Table 1. Field data and soil profile logs, if applicable, are provided as Appendix B. A photographic log is provided as Appendix C. Laboratory analytical reports are provided as Appendix D.

The final dimensions of the excavated area were approximately 145 feet in length and ranged from 10 to 45 feet in width and five inches to 1.5 feet in depth. During the course of remediation activities, approximately 60 cubic yards of impacted soil were transported to an NMOCD-approved surface waste facility for disposal.

5.0 SOIL CLOSURE REQUEST

Requesting a deferral of remediation closure due date with the approval of this submission?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Have the lateral and vertical extents of contamination been fully delineated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Was the release entirely contained within a lined containment area?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the site's existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
What was the total surface area (sq. ft.) remediated?	<u>2,410</u>	
What was the total volume (cy) remediated?	<u>60</u>	

Remediation activities were conducted in accordance with NMOCD regulatory guidelines. Impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards was excavated and transported to an NMOCD-permitted disposal facility. Laboratory analytical results from confirmation soil samples indicate in-situ concentrations of BTEX, TPH, and chloride are below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards.

Based on laboratory analytical results and field activities conducted to date, Etech recommends Permian Resources, provide copies of this to the appropriate agencies and request closure be granted to the Black River 3 Fed #1 Site.

6.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste containing earthen material with concentrations of less than 600 mg/kg chloride, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg benzene?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Requesting a reclamation approval with this submission?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Requesting a restoration complete approval with this submission?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
What was the total surface area (sq. ft.) reclaimed?	2,410
What was the total volume (cy) reclaimed?	60

Areas within the pasture affected by remediation and reclamation activities will be reseeded with a landowner-approved seed mixture that is certified as weed-free seed free at a time more conducive to germination. The seed will be installed at the prescribed rate utilizing either a seed drill or a broadcaster and harrow.

7.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Soil Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Permian Resources. Use of the information contained in this report is prohibited without the consent of Etech and/or Permian Resources.

8.0 DISTRIBUTION

Permian Resources

300 N. Marienfeld St. Suite 100

Midland, TX 79701

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division, District 1

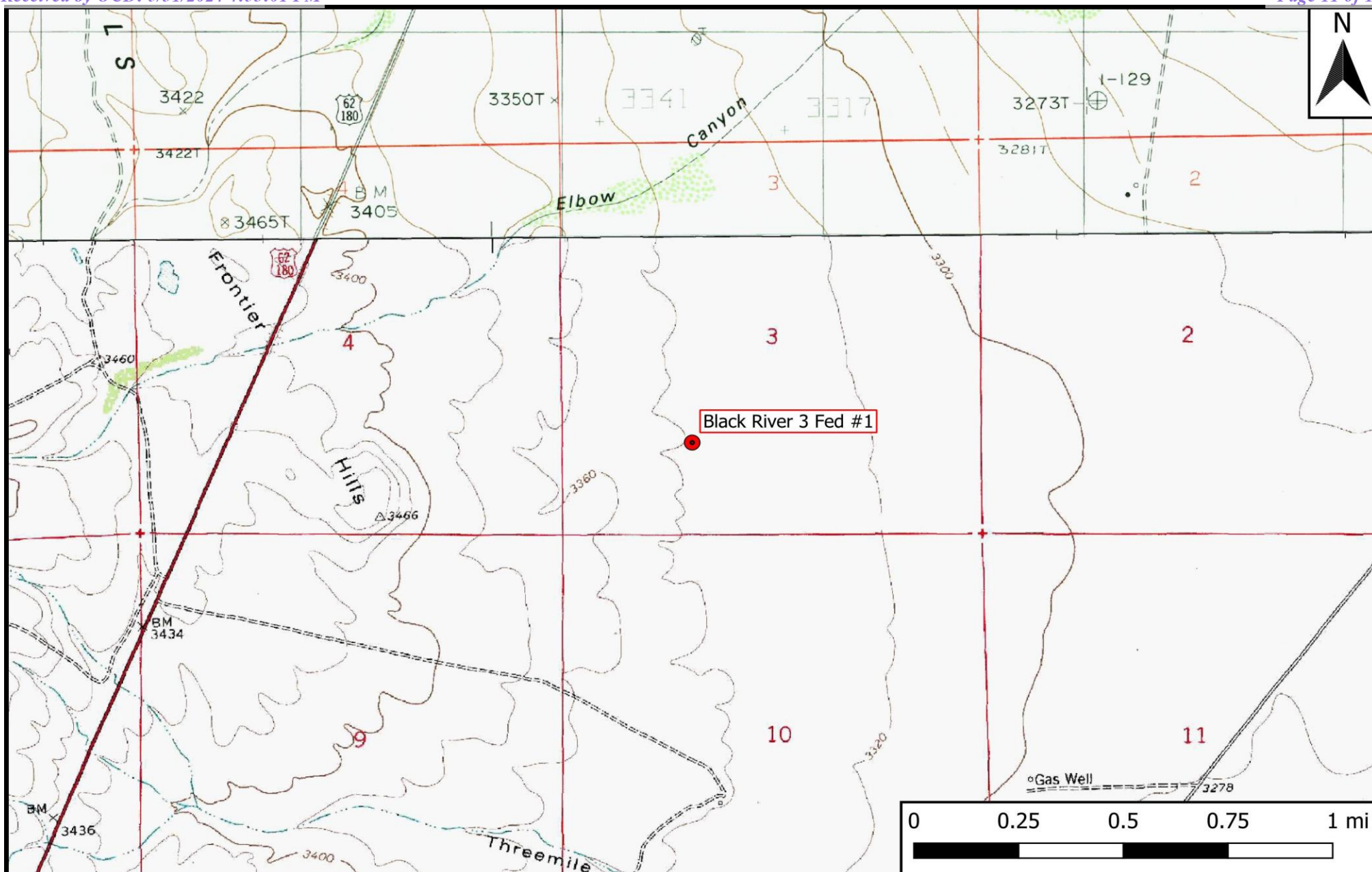
1220 South St. Francis Drive

Santa Fe, NM 87505

(Electronic Submission)

Figure 1

Topographic Map



Legend

● Site Location

Figure 1

Topographic Map
Permian Resources
Black River 3 Fed #1
GPS: 32.242634, -104.284017
Eddy County

ETECH
Environmental & Safety Solutions, Inc.

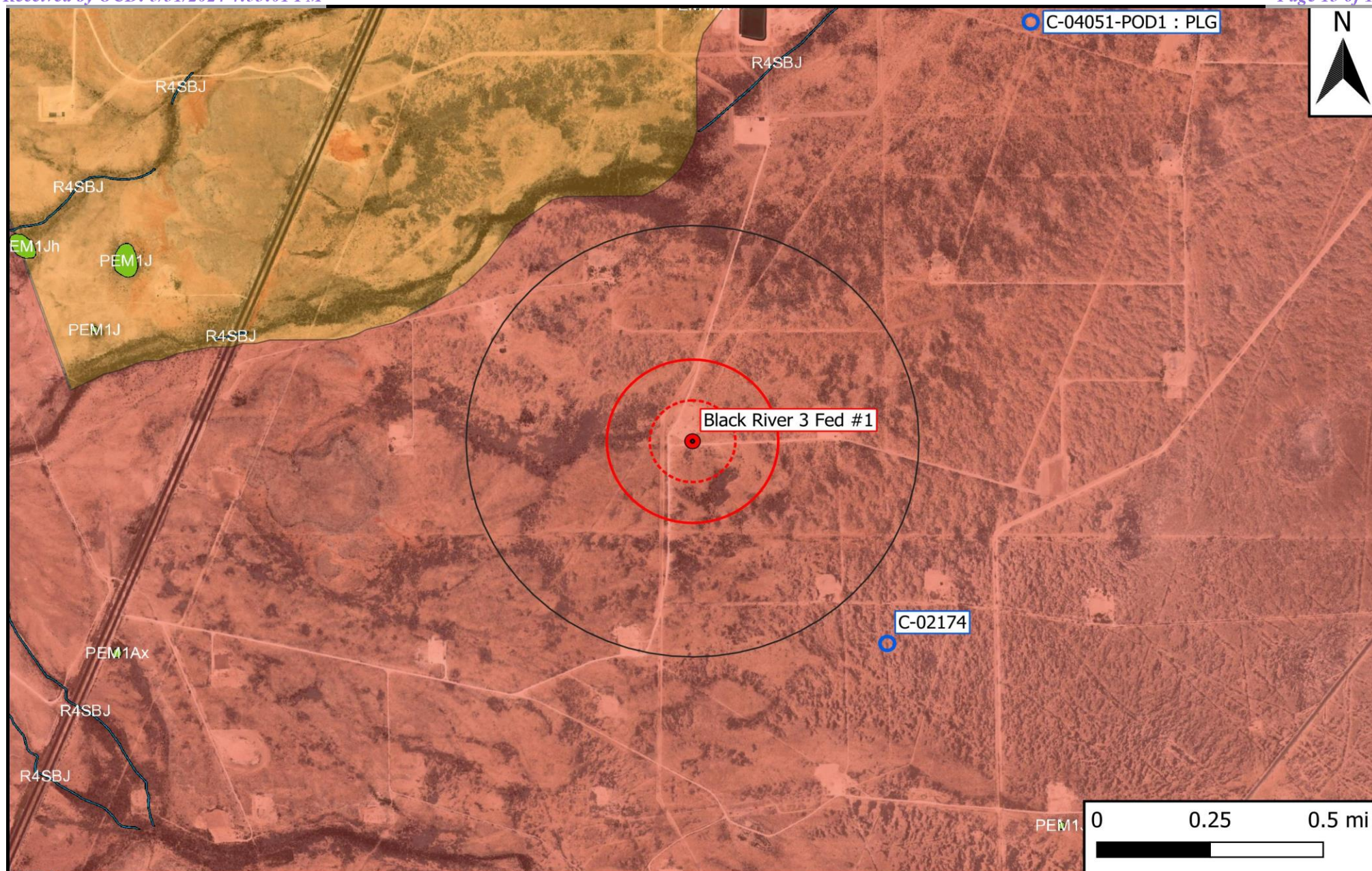
Drafted: mag

Checked: jwl

Date: 1/10/24

Figure 2

Aerial Proximity Map



Legend	
● Site Location	 500 Ft Radius
○ Well - NMOSE	 1000 Ft Radius
○ Well - USGS	 0.5 Mi Radius
 Potash Mine Workings	 1% Annual Flood Chance
 Medium/High Karst	 Lake/Freshwater Pond
	 Emergent/Forested Wetlands
	 Riverine

Figure 2
Aerial Proximity Map
Permian Resources
Black River 3 Fed #1
GPS: 32.242634, -104.284017
Eddy County

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Environmental & Safety Solutions, Inc.

Drafted: mag

Checked: jwl

Date: 1/10/24

Figure 3

Site and Sample Location Map

**Figure 3**

Site and Sample Location Map
Permian Resources
Black River 3 Fed #1
GPS: 32.242634, -104.284017
Eddy County

Legend

- Floor Sample
- ↔ Wall Sample
- Excavation



Drafted: mag

Checked: rr

Date: 4/30/24

Table 1
Concentrations of BTEX, TPH, and Chloride in Soil

Table 1 Concentrations of BTEX, TPH, and Chloride in Soil Permian Resources Black River 3 Fed #1 NMOCD Ref. #: nMAP1827460454											
NMOCD Closure Criteria				10	50	-	-	-	-	100	600
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
Delineation Soil Samples											
SP 1 @ 1'	2/5/2024	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SP 2 @ 5"	2/5/2024	0.42	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SP 3 @ 1'	2/5/2024	1	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	10.9	<30.0	752
SP 4 @ 1.5'	2/5/2024	1.5	In-Situ	<0.050	<0.300	<10.0	12.9	12.9	53.6	66.5	16.0
SP 5 @ 1.5'	2/5/2024	1.5	In-Situ	<0.050	<0.300	<10.0	11.5	11.5	35.1	46.6	32.0
SP 6 @ 1.5'	2/5/2024	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	19.6	19.6	32.0
SP 7 @ 1.5'	2/5/2024	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	12.1	12.1	32.0
Excavation Confirmation Soil Samples											
FL - 1 @ 1.5'	2/14/2024	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL - 2 @ 0.5'	2/14/2024	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
FL - 3 @ 0.5'	2/14/2024	0.5	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,500
FL 3A @ 1'	4/18/2024	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FL - 4 @ 1.5'	2/14/2024	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL - 7 @ 0.5'	2/14/2024	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
FL - 8 @ 0.5'	2/14/2024	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	12.1	12.1	256
FL - 9 @ 1.5'	2/14/2024	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	10.7	10.7	48.0
FL - 10 @ 1.5'	2/14/2024	1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	28.4	28.4	48.0
EW - 1	2/5/2024	0-1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EW - 2	2/5/2024	0-1.5	Excavated	<0.050	<0.300	<10.0	19.4	19.4	92.2	112	32.0
EW 2A	4/18/2024	0-1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
NW - 1	2/5/2024	0-1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW - 1	2/5/2024	0-1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WW - 1	2/5/2024	0-1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
WW - 2	2/5/2024	0-1.5	Excavated	<0.050	<0.300	<10.0	282	282	1,240	1,520	32.0
WW 2A	4/18/2024	0-1.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
Backfill Characterization Soil Sample											
R360 West Pit	5/15/2024	0	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	272

Dash (-): Sample not analyzed for that constituent.

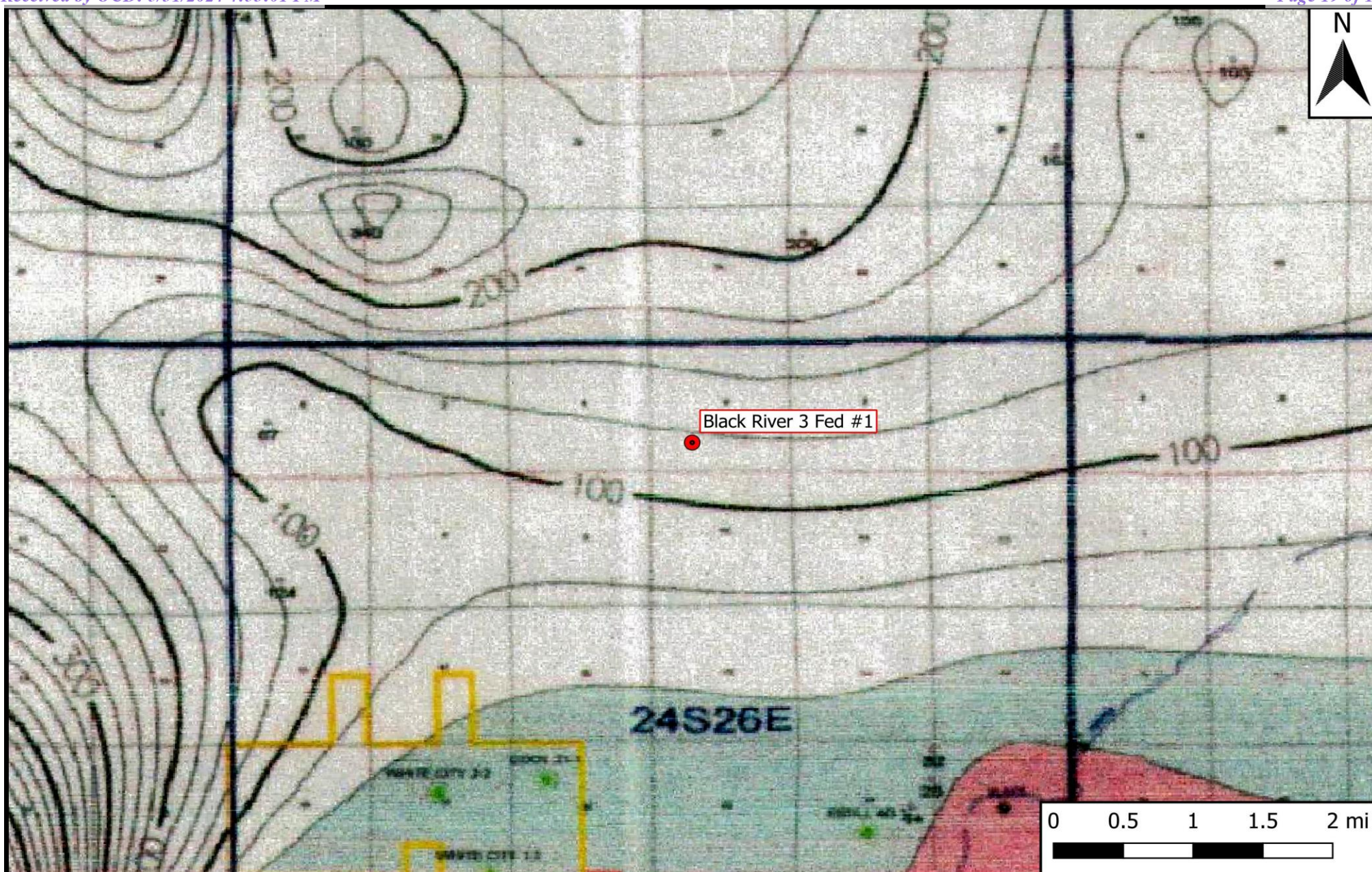
Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

Shaded Red Border: Highest Observed Constituent

Appendix A

Depth to Groundwater Information

**Legend**

- Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
Permian Resources
Black River 3 Fed #1
GPS: 32.242634, -104.284017
Eddy County

eTECH
Environmental & Safety Solutions, Inc.

Drafted: mag

Checked: jwl

Date: 1/10/24



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,

O=orphaned,



C=the file is closed)

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tw	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C 02174		C	ED			2	10	24S	26E	568143	3566804* 	1021	263	233	30
C 00293		C	ED	3	2	3	10	24S	26E	567445	3566100* 	1455	250		

Average Depth to Water:

233 feet

Minimum Depth:

233 feet

Maximum Depth:

233 feet

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 567450.48

Northing (Y): 3567555.2

Radius: 1610


*UTM location was derived from PLSS - see Help

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



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)			
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 02174			2	10	24S	26E	568143	3566804* 
<hr/>									
Driller License:	969	Driller Company:		MAGBY, EDGAR W. & BRAD					
Driller Name:	EDGAR W. MAGBY								
Drill Start Date:	05/03/1989	Drill Finish Date:		05/10/1989		Plug Date:			
Log File Date:	05/18/1989	PCW Rcv Date:				Source: Shallow			
Pump Type:		Pipe Discharge Size:				Estimated Yield:			
Casing Size:		Depth Well:		263 feet		Depth Water:		233 feet	

*UTM location was derived from PLSS - see Help

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

1/10/24 9:56 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)	
		(quarters are smallest to largest)				X	Y
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng
	C 00293	3	2	3	10	24S	26E
						567445	3566100*

Driller License:		Driller Company:	
Driller Name:		CHARLES MOORE	
Drill Start Date:		Drill Finish Date:	
Log File Date:		PCW Rcv Date:	
Pump Type:		Pipe Discharge Size:	
Casing Size:		Depth Well:	
7.00		250 feet	
		Plug Date:	
		Source:	
		Estimated Yield:	
		Depth Water:	

*UTM location was derived from PLSS - see Help

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

Tm
199255

To Appropriate the Underground Waters of the State of New Mexico

10/10/10

FILED
DEC 19 1951
OFFICE
ARTESIAN WELL SUPERVISOR
ROSWEEL, NEW MEXICO

RECEIVED
DEC 7 1961

ment and each and all of the items contained therein, and belief.

John a Mayer, applicant

of *November* A. D. 19*87*
Richard L. ...
 Notary Public.
 NOV 9 1987
 ANTHONY WELL SUPERVISOR
 ROSWELL, NEW MEXICO

APPROVAL OF THE STATE ENGINEER

Number of this permit C-293 Date received corrected _____
Recorded in Book C-2 Publication of notice ordered _____
Page 293 Name of paper _____
Application received December 7, 1951. Affidavit of publication filed _____
Date returned for correction _____ Date of approval December 11, 1951.

This application is approved for 3 acre feet of water provided it is not exercised to the detriment of any others having prior valid and existing rights to the use of the waters of said underground source ; and further provided that: (1). Appropriation of water to be limited not to exceed 3 acre feet per annum for domestic purposes and the irrigation of not more than 1 acre of non-commercial garden or lawn.

Works shall be completed on or before December 11, 1952.
Water shall be applied to beneficial use on or before _____

This is to certify that I have examined the above application for permit to appropriate the underground waters of the State of New Mexico and hereby approve the same subject to the foregoing provisions and conditions.

Witness my hand and seal this 11th day of December A. D., 19 51
[Signature]
Assistant State Engineer

LOCATE WELL AND ACREAGE TO BE IRRIGATED AS ACCURATELY AS POSSIBLE ON FOLLOWING PLAT:

Section(s) _____, Township _____, Range _____, N. M. P. M.

INSTRUCTIONS

This form shall be executed, preferably typewritten, in triplicate and shall be accompanied by a filing fee of \$5.00. Each of triplicate copies must be properly signed and attested.
A separate application for permit must be filed for each well used.
Secs. 1-4—Fill out all blanks fully and accurately.
Sec. 5—Irrigation use shall be stated in feet depth or acre feet of water per acre to be applied on the land. If for domestic, municipal, or other purposes, state total quantity in acre feet to be used annually. Domestic use may include the irrigation of not more than one acre of lawn and garden for noncommercial use.
Sec. 6—Describe only the lands to be irrigated. If on unsurveyed lands describe by legal subdivision "as projected" from the nearest government survey corners, or describe by metes and bounds and tie survey to some permanent, easily located natural object.
Sec. 7—Estimate time reasonably required to commence and to complete project.
Sec. 8—If lands are irrigated from any other source, explain in this section. Give any other data necessary to fully describe water right sought.
If additional space is necessary, use a separate sheet or sheets and attach securely hereto.

**Legend**

- Site Location
- Well - USGS
- ⋯ 500 Ft Radius
- ⋯ 1000 Ft Radius
- 0.5 Mi Radius

Figure 5

USGS Well Proximity Map
Permian Resources
Black River 3 Fed #1
GPS: 32.242634, -104.284017
Eddy County



Drafted: mag

Checked: jwl

Date: 1/10/24



[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

GO

[Click for News Bulletins](#)

[Groundwater levels for the Nation](#)

! Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 321600104160501

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321600104160501 23S.26E.35.11342

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°16'00", Longitude 104°16'05" NAD27

Land-surface elevation 3,261 feet above NAVD88

The depth of the well is 231 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

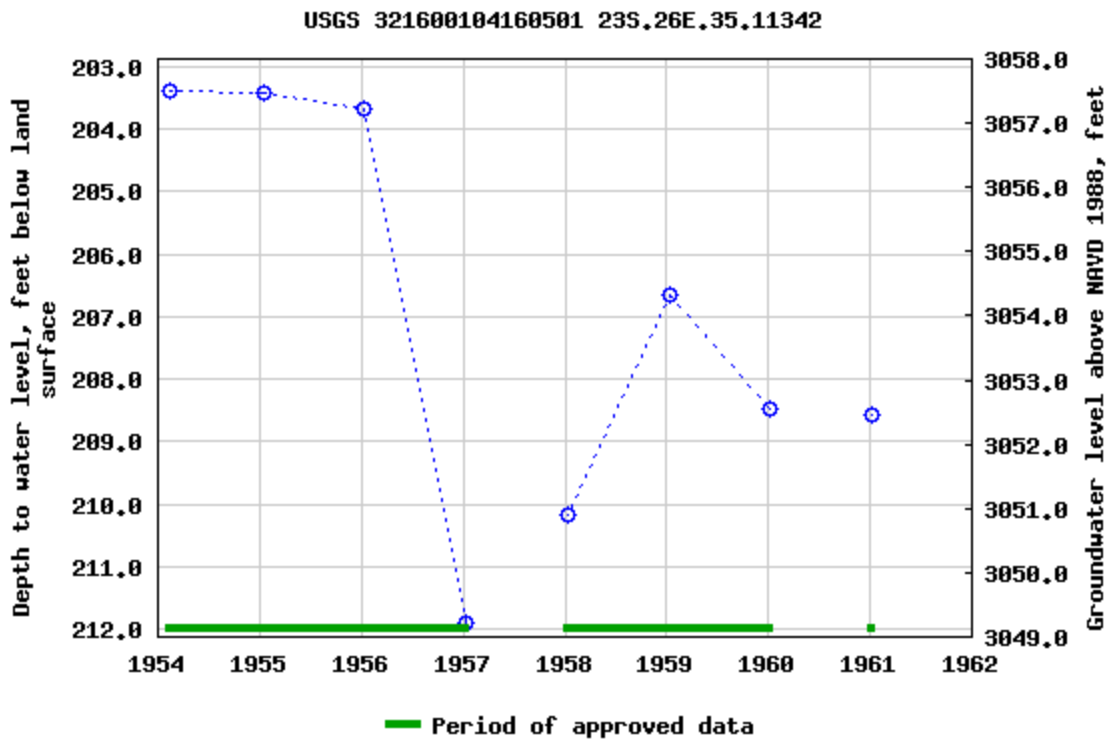
Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2024-01-10 11:55:05 EST

0.7 0.62 nadww01

Appendix B

Field Data



Sample Log

Date: _____

Project: Big Boy State 1 Battery

Project Number: 19746 Latitude: 32.787057 Longitude: -104.237215

[illegible]

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas



Soil Profile

Date: 5/31/2024

Project: Black River 3 Fed #1
Project Number: 19601 Latitude: 32.242634 Longitude: -104.284017

Depth (ft. bgs)	Description
1	L. Grey Alkali Topsoil
2	White Caliche/Rock - TD
3	
4	
5	
6	
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Appendix C

Photographic Log

Photographic Log

Photo Number: 1	
Photo Direction: Northeast	
Photo Description: View of impacted area.	

Photo Number: 2	
Photo Direction: Southwest	
Photo Description: View of impacted area.	

Photographic Log



Photo Number: 3	<div>Jan 26, 2024 at 10:59:35 AM +32.242727,-104.283973 38° NE Carlsbad NM 88220 United States</div> 
Photo Direction: Northeast	
Photo Description: View of original excavation.	

Photo Number: 4	<div>Jan 26, 2024 at 10:59:24 AM +32.242635,-104.283943 18° N Carlsbad NM 88220 United States</div> 
Photo Direction: North	
Photo Description: View of original excavation.	

Photographic Log



Photo Number: 5	 <p>Apr 17, 2024 at 2:27:41 PM</p>
Photo Direction: Northeast	
GPS: 32.24255, -104.28408	
Photo Description: View of portion of open excavation.	

Photo Number: 6	 <p>Apr 17, 2024 at 2:29:26 PM</p>
Photo Direction: Southwest	
GPS: 32.24288, -104.28379	
Photo Description: View of portion of open excavation.	

Photographic Log



Photo Number: 7	
Photo Direction: Northeast	
GPS: 32.24266, -104.28403	
Photo Description: View of portion of open excavation.	

Photo Number: 8	
Photo Direction: Northwest	
GPS: 32.24258, -104.28394	
Photo Description: View of portion of open excavation.	

Photographic Log


Photo Number: 9	 <p>Apr 29, 2024 at 4:32:42 PM +32.242859,-104.283777 239° SW Altitude:1026.4meter Speed:2.4km/h</p>
Photo Direction West	
Photo Description: View of remediated area after backfill and grading.	

Photo Number: 10	 <p>Apr 29, 2024 at 4:33:11 PM +32.242754,-104.283954 44° NE Altitude:1026.0meter Speed:3.3km/h</p>
Photo Direction: Northeast	
Photo Description: View of remediated area after backfill and grading.	

Appendix D

Laboratory Analytical Reports



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

February 12, 2024

ROBBIE RUNNELS

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: BLACK RIVER 3 FED 1

Enclosed are the results of analyses for samples received by the laboratory on 02/06/24 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: SP 1 @ 1' (H240557-01)

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	02/06/2024	ND	1.93	96.6	2.00	0.344	
Toluene*	<0.050	0.050	02/06/2024	ND	2.05	102	2.00	0.881	
Ethylbenzene*	<0.050	0.050	02/06/2024	ND	2.03	101	2.00	0.269	
Total Xylenes*	<0.150	0.150	02/06/2024	ND	6.14	102	6.00	0.0931	
Total BTEx	<0.300	0.300	02/06/2024	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	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	<10.0	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: SP 2 @ 5" (H240557-02)

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	02/06/2024	ND	1.93	96.6	2.00	0.344		
Toluene*	<0.050	0.050	02/06/2024	ND	2.05	102	2.00	0.881		
Ethylbenzene*	<0.050	0.050	02/06/2024	ND	2.03	101	2.00	0.269		
Total Xylenes*	<0.150	0.150	02/06/2024	ND	6.14	102	6.00	0.0931		
Total BTEX	<0.300	0.300	02/06/2024	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	64.0	16.0	02/07/2024	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	<10.0	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 99.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: SP 3 @ 1' (H240557-03)

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	02/06/2024	ND	1.93	96.6	2.00	0.344	
Toluene*	<0.050	0.050	02/06/2024	ND	2.05	102	2.00	0.881	
Ethylbenzene*	<0.050	0.050	02/06/2024	ND	2.03	101	2.00	0.269	
Total Xylenes*	<0.150	0.150	02/06/2024	ND	6.14	102	6.00	0.0931	
Total BTEX	<0.300	0.300	02/06/2024	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	752	16.0	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	<10.0	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	10.9	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 95.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: SP 4 @ 1.5' (H240557-04)

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	02/06/2024	ND	1.93	96.6	2.00	0.344	
Toluene*	<0.050	0.050	02/06/2024	ND	2.05	102	2.00	0.881	
Ethylbenzene*	<0.050	0.050	02/06/2024	ND	2.03	101	2.00	0.269	
Total Xylenes*	<0.150	0.150	02/06/2024	ND	6.14	102	6.00	0.0931	
Total BTEX	<0.300	0.300	02/06/2024	ND					

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

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/07/2024	ND	448	112	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	12.9	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	53.6	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 115 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: SP 5 @ 1.5' (H240557-05)

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	02/07/2024	ND	1.93	96.6	2.00	0.344	
Toluene*	<0.050	0.050	02/07/2024	ND	2.05	102	2.00	0.881	
Ethylbenzene*	<0.050	0.050	02/07/2024	ND	2.03	101	2.00	0.269	
Total Xylenes*	<0.150	0.150	02/07/2024	ND	6.14	102	6.00	0.0931	
Total BTEX	<0.300	0.300	02/07/2024	ND					

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

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/07/2024	ND	448	112	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	11.5	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	35.1	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 91.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: SP 6 @ 1.5' (H240557-06)

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	02/07/2024	ND	1.93	96.6	2.00	0.344		
Toluene*	<0.050	0.050	02/07/2024	ND	2.05	102	2.00	0.881		
Ethylbenzene*	<0.050	0.050	02/07/2024	ND	2.03	101	2.00	0.269		
Total Xylenes*	<0.150	0.150	02/07/2024	ND	6.14	102	6.00	0.0931		
Total BTEX	<0.300	0.300	02/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	<10.0	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	19.6	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 99.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 113 % 49.1-148

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Analytical Results For:

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 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: SP 7 @ 1.5' (H240557-07)

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	02/07/2024	ND	1.93	96.6	2.00	0.344		
Toluene*	<0.050	0.050	02/07/2024	ND	2.05	102	2.00	0.881		
Ethylbenzene*	<0.050	0.050	02/07/2024	ND	2.03	101	2.00	0.269		
Total Xylenes*	<0.150	0.150	02/07/2024	ND	6.14	102	6.00	0.0931		
Total BTEX	<0.300	0.300	02/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	<10.0	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	12.1	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 96.6 % 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: EW - 1 (H240557-08)

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	02/07/2024	ND	2.11	106	2.00	0.442	
Toluene*	<0.050	0.050	02/07/2024	ND	2.11	106	2.00	0.00303	
Ethylbenzene*	<0.050	0.050	02/07/2024	ND	2.09	105	2.00	0.0724	
Total Xylenes*	<0.150	0.150	02/07/2024	ND	6.12	102	6.00	0.00756	
Total BTEX	<0.300	0.300	02/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 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	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	<10.0	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 90.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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Analytical Results For:

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Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: EW - 2 (H240557-09)

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	02/07/2024	ND	2.11	106	2.00	0.442	
Toluene*	<0.050	0.050	02/07/2024	ND	2.11	106	2.00	0.00303	
Ethylbenzene*	<0.050	0.050	02/07/2024	ND	2.09	105	2.00	0.0724	
Total Xylenes*	<0.150	0.150	02/07/2024	ND	6.12	102	6.00	0.00756	
Total BTEX	<0.300	0.300	02/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 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	32.0	16.0	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	19.4	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	92.2	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 89.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Analytical Results For:

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 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
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Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: NW - 1 (H240557-10)

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	02/07/2024	ND	2.11	106	2.00	0.442		
Toluene*	<0.050	0.050	02/07/2024	ND	2.11	106	2.00	0.00303		
Ethylbenzene*	<0.050	0.050	02/07/2024	ND	2.09	105	2.00	0.0724		
Total Xylenes*	<0.150	0.150	02/07/2024	ND	6.12	102	6.00	0.00756		
Total BTEX	<0.300	0.300	02/07/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	<10.0	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 99.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 112 % 49.1-148

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Analytical Results For:

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 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: WW - 1 (H240557-11)

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	02/07/2024	ND	2.11	106	2.00	0.442		
Toluene*	<0.050	0.050	02/07/2024	ND	2.11	106	2.00	0.00303		
Ethylbenzene*	<0.050	0.050	02/07/2024	ND	2.09	105	2.00	0.0724		
Total Xylenes*	<0.150	0.150	02/07/2024	ND	6.12	102	6.00	0.00756		
Total BTX	<0.300	0.300	02/07/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 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	80.0	16.0	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	<10.0	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	<10.0	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 97.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/06/2024	Sampling Date:	02/05/2024
Reported:	02/12/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: WW - 2 (H240557-12)

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	02/07/2024	ND	2.11	106	2.00	0.442	
Toluene*	<0.050	0.050	02/07/2024	ND	2.11	106	2.00	0.00303	
Ethylbenzene*	<0.050	0.050	02/07/2024	ND	2.09	105	2.00	0.0724	
Total Xylenes*	<0.150	0.150	02/07/2024	ND	6.12	102	6.00	0.00756	
Total BTEX	<0.300	0.300	02/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/07/2024	ND	196	98.1	200	0.644	
DRO >C10-C28*	282	10.0	02/07/2024	ND	193	96.5	200	5.65	
EXT DRO >C28-C36	1240	10.0	02/07/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
ROBBIE RUNNELS
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:02/06/2024

Reported:02/12/2024

Project Name:BLACK RIVER 3 FED 1

Project Number:19601

Project Location:PERMIAN RESOURCES - 32.38642-104.21

Sampling Date:02/05/2024

Sampling Type:Soil

Sampling Condition:Cool & Intact

Sample Received By:Tamara Oldaker

Sample ID: SW - 1 (H240557-13)

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	02/07/2024	ND	2.11	106	2.00	0.442	
Toluene*	<0.050	0.050	02/07/2024	ND	2.11	106	2.00	0.00303	
Ethylbenzene*	<0.050	0.050	02/07/2024	ND	2.09	105	2.00	0.0724	
Total Xylenes*	<0.150	0.150	02/07/2024	ND	6.12	102	6.00	0.00756	
Total BTEX	<0.300	0.300	02/07/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 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	02/07/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	02/10/2024	ND	196	98.1	200	0.644		
DRO >C10-C28*	<10.0	10.0	02/10/2024	ND	193	96.5	200	5.65		
EXT DRO >C28-C36	<10.0	10.0	02/10/2024	ND						

Surrogate: 1-Chlorooctane 79.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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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



•ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.				BILL TO				ANALYSIS REQUEST																							
Project Manager: Robbie Runnels				P.O. #:				Chloride TPH (8015M) BTEX (8021B)																							
Address: 2617 West Marland				Company: Etech																											
City: Hobbs State: NM Zip: 88240				Attn: Robbie Runnels																											
Phone #: (575) 264-9884 Fax #:				Address:																											
Project #: 19601 Project Owner: Permian Resources				City:																											
Project Name: Black River 3 Fed 1				State: Zip:																											
Project Location: GPS: (32.38642, -104.284017)				Phone #:																											
Sampler Name: Martin Sepulveda				Fax #:																											
FOR LAB USE ONLY		Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX				PRESERV.		SAMPLING															
										GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:				ACID/BASE: ICE / COOL OTHER:		DATE TIME															
H240557		1		SP1 @ 1'		C 1				X				X		2/5/24				X X X											
		2		SP2 @ 5"		C 1				X				X		2/5/24				X X X											
		3		SP3 @ 1'		C 1				X				X		2/5/24				X X X											
		4		SP4 @ 1.5'		C 1				X				X		2/5/24				X X X											
		5		SP5 @ 1.5'		C 1				X				X		2/5/24				X X X											
		6		SP6 @ 1.5'		C 1				X				X		2/5/24				X X X											
		7		SP7 @ 1.5'		C 1				X				X		2/5/24				X X X											
		8		EW-1		C 1				X				X		2/5/24				X X X											
		9		EW-2		C 1				X				X		2/5/24				X X X											
		10		NW-1		C 1				X				X		2/5/24				X X X											
<p>PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>																															
Relinquished By:				Date: 2-6-24		Received By:				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Phone #:																	
				Time: 1450						Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Fax #:																	
Refiniquished By:				Date:		Received By:				REMARKS:																					
				Time:																											
Delivered By: (Circle One)						Sample Condition				CHECKED BY:				Please email copy of COC and results to pm@etechenv.com.																	
Sampler - UPS - Bus - Other:						Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>				(Initials)																					
						<input type="checkbox"/> Yes <input type="checkbox"/> No				J.S.																					



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

February 19, 2024

ROBBIE RUNNELS

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: BLACK RIVER 3 FED 1

Enclosed are the results of analyses for samples received by the laboratory on 02/14/24 15:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Coley 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/14/2024	Sampling Date:	02/14/2024
Reported:	02/19/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: FL - 1 @ 1.5' (H240709-01)

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	02/15/2024	ND	1.97	98.5	2.00	14.2	
Toluene*	<0.050	0.050	02/15/2024	ND	1.96	97.9	2.00	14.4	
Ethylbenzene*	<0.050	0.050	02/15/2024	ND	1.94	97.0	2.00	14.2	
Total Xylenes*	<0.150	0.150	02/15/2024	ND	5.65	94.1	6.00	14.6	
Total BTX	<0.300	0.300	02/15/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/15/2024	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	02/15/2024	ND	197	98.6	200	1.82	
DRO >C10-C28*	<10.0	10.0	02/15/2024	ND	195	97.5	200	5.66	
EXT DRO >C28-C36	<10.0	10.0	02/15/2024	ND					

Surrogate: 1-Chlorooctane 88.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.7 % 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/14/2024	Sampling Date:	02/14/2024
Reported:	02/19/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: FL - 2 @ 0.5' (H240709-02)

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	02/15/2024	ND	1.97	98.5	2.00	14.2		
Toluene*	<0.050	0.050	02/15/2024	ND	1.96	97.9	2.00	14.4		
Ethylbenzene*	<0.050	0.050	02/15/2024	ND	1.94	97.0	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/15/2024	ND	5.65	94.1	6.00	14.6		
Total BTEX	<0.300	0.300	02/15/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	02/15/2024	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	02/15/2024	ND	197	98.6	200	1.82	
DRO >C10-C28*	<10.0	10.0	02/15/2024	ND	195	97.5	200	5.66	
EXT DRO >C28-C36	<10.0	10.0	02/15/2024	ND					

Surrogate: 1-Chlorooctane 87.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/14/2024	Sampling Date:	02/14/2024
Reported:	02/19/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: FL - 3 @ 0.5' (H240709-03)

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	02/15/2024	ND	1.97	98.5	2.00	14.2		
Toluene*	<0.050	0.050	02/15/2024	ND	1.96	97.9	2.00	14.4		
Ethylbenzene*	<0.050	0.050	02/15/2024	ND	1.94	97.0	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/15/2024	ND	5.65	94.1	6.00	14.6		
Total BTEX	<0.300	0.300	02/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 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	1500	16.0	02/15/2024	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	02/15/2024	ND	197	98.6	200	1.82	
DRO >C10-C28*	<10.0	10.0	02/15/2024	ND	195	97.5	200	5.66	
EXT DRO >C28-C36	<10.0	10.0	02/15/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/14/2024	Sampling Date:	02/14/2024
Reported:	02/19/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: FL - 4 @ 1.5' (H240709-04)

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	02/15/2024	ND	1.97	98.5	2.00	14.2		
Toluene*	<0.050	0.050	02/15/2024	ND	1.96	97.9	2.00	14.4		
Ethylbenzene*	<0.050	0.050	02/15/2024	ND	1.94	97.0	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/15/2024	ND	5.65	94.1	6.00	14.6		
Total BTEX	<0.300	0.300	02/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	02/15/2024	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	02/15/2024	ND	197	98.6	200	1.82	
DRO >C10-C28*	<10.0	10.0	02/15/2024	ND	195	97.5	200	5.66	
EXT DRO >C28-C36	<10.0	10.0	02/15/2024	ND					

Surrogate: 1-Chlorooctane 92.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.0 % 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/14/2024	Sampling Date:	02/14/2024
Reported:	02/19/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: FL - 7 @ 0.5' (H240709-05)

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	02/15/2024	ND	1.97	98.5	2.00	14.2		
Toluene*	<0.050	0.050	02/15/2024	ND	1.96	97.9	2.00	14.4		
Ethylbenzene*	<0.050	0.050	02/15/2024	ND	1.94	97.0	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/15/2024	ND	5.65	94.1	6.00	14.6		
Total BTEX	<0.300	0.300	02/15/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	02/15/2024	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	02/15/2024	ND	197	98.6	200	1.82	
DRO >C10-C28*	<10.0	10.0	02/15/2024	ND	195	97.5	200	5.66	
EXT DRO >C28-C36	<10.0	10.0	02/15/2024	ND					

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.3 % 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/14/2024	Sampling Date:	02/14/2024
Reported:	02/19/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.2		

Sample ID: FL - 8 @ 0.5' (H240709-06)

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	02/15/2024	ND	1.97	98.5	2.00	14.2		
Toluene*	<0.050	0.050	02/15/2024	ND	1.96	97.9	2.00	14.4		
Ethylbenzene*	<0.050	0.050	02/15/2024	ND	1.94	97.0	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/15/2024	ND	5.65	94.1	6.00	14.6		
Total BTEX	<0.300	0.300	02/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 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	256	16.0	02/15/2024	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	02/15/2024	ND	197	98.6	200	1.82	
DRO >C10-C28*	<10.0	10.0	02/15/2024	ND	195	97.5	200	5.66	
EXT DRO >C28-C36	12.1	10.0	02/15/2024	ND					

Surrogate: 1-Chlorooctane 85.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.3 % 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/14/2024	Sampling Date:	02/14/2024
Reported:	02/19/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.21		

Sample ID: FL - 9 @ 1.5' (H240709-07)

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	02/15/2024	ND	1.97	98.5	2.00	14.2		
Toluene*	<0.050	0.050	02/15/2024	ND	1.96	97.9	2.00	14.4		
Ethylbenzene*	<0.050	0.050	02/15/2024	ND	1.94	97.0	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/15/2024	ND	5.65	94.1	6.00	14.6		
Total BTEX	<0.300	0.300	02/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	02/15/2024	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	02/15/2024	ND	197	98.6	200	1.82	
DRO >C10-C28*	<10.0	10.0	02/15/2024	ND	195	97.5	200	5.66	
EXT DRO >C28-C36	10.7	10.0	02/15/2024	ND					

Surrogate: 1-Chlorooctane 87.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.4 % 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	02/14/2024	Sampling Date:	02/14/2024
Reported:	02/19/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES - 32.38642-104.2		

Sample ID: FL - 10 @ 1.5' (H240709-08)

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	02/15/2024	ND	1.97	98.5	2.00	14.2		
Toluene*	<0.050	0.050	02/15/2024	ND	1.96	97.9	2.00	14.4		
Ethylbenzene*	<0.050	0.050	02/15/2024	ND	1.94	97.0	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/15/2024	ND	5.65	94.1	6.00	14.6		
Total BTEX	<0.300	0.300	02/15/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/15/2024	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	02/15/2024	ND	197	98.6	200	1.82	
DRO >C10-C28*	<10.0	10.0	02/15/2024	ND	195	97.5	200	5.66	
EXT DRO >C28-C36	28.4	10.0	02/15/2024	ND					

Surrogate: 1-Chlorooctane 83.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

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

**ARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.						BILL TO							ANALYSIS REQUEST																	
Project Manager: Robbie Runnels						P.O. #:							Chloride TPH (8015M) BTEX (8021B)																	
Address: 2617 West Marland						Company: Etech																								
City: Hobbs State: NM Zip: 88240						Attn: Robbie Runnels																								
Phone #: (575) 264-9884 Fax #:						Address:																								
Project #: 19601 Project Owner: Permian Resources						City:																								
Project Name: Black River 3 Fed 1						State: Zip:																								
Project Location: GPS: (32.38642, -104.284017)						Phone #:																								
Sampler Name: Robbie Runnels						Fax #:																								
FOR LAB USE ONLY																														
Lab I.D. H240709		Sample I.D.				(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV.	SAMPLING																	
								GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME												
1 FL-1 @ 1.5'		C	1			X							X			2/14/24		X	X	X										
2 FL-2 @ 0.5'		C	1			X							X			2/14/24		X	X	X										
3 FL-3 @ 0.5'		C	1			X							X			2/14/24		X	X	X										
4 FL-4 @ 1.5'		C	1			X							X			2/14/24		X	X	X										
5 FL-7 @ 0.5'		C	1			X							X			2/14/24		X	X	X										
6 FL-8 @ 0.5'		C	1			X							X			2/14/24		X	X	X										
7 FL-9 @ 1.5'		C	1			X							X			2/14/24		X	X	X										
8 FL-10 @ 1.5'		C	1			X							X			2/14/24		X	X	X										
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																														
Relinquished By: [Signature]						Date: 2-14-24						Received By: [Signature]						Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:												
						Time: 1505												Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #:												
Relinquished By:						Date:						Received By:						REMARKS:												
						Time:																								
Delivered By: (Circle One)						#140						Sample Condition Cool Intact						CHECKED BY: (Initials)												
Sampler - UPS - Bus - Other:						-2.6c						<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes						[Signature]												
						<input type="checkbox"/> No <input type="checkbox"/> No												Please email copy of COC and results to pm@etechenv.com.												



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

April 22, 2024

ROBBIE RUNNELS

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: BLACK RIVER 3 FED 1

Enclosed are the results of analyses for samples received by the laboratory on 04/18/24 15:02.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	04/18/2024	Sampling Date:	04/18/2024
Reported:	04/22/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES 32.38642-104.284		

Sample ID: FL 3A @ 1' (H242095-01)

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	04/21/2024	ND	2.17	108	2.00	2.12	
Toluene*	<0.050	0.050	04/21/2024	ND	2.09	105	2.00	1.72	
Ethylbenzene*	<0.050	0.050	04/21/2024	ND	2.15	108	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/21/2024	ND	6.47	108	6.00	3.76	
Total BTX	<0.300	0.300	04/21/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/22/2024	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	04/22/2024	ND	197	98.4	200	1.94	
DRO >C10-C28*	<10.0	10.0	04/22/2024	ND	193	96.4	200	9.64	
EXT DRO >C28-C36	<10.0	10.0	04/22/2024	ND					

Surrogate: 1-Chlorooctane 78.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.0 % 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:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	04/18/2024	Sampling Date:	04/18/2024
Reported:	04/22/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES 32.38642-104.284		

Sample ID: EW 2A (H242095-02)

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	04/21/2024	ND	2.17	108	2.00	2.12	
Toluene*	<0.050	0.050	04/21/2024	ND	2.09	105	2.00	1.72	
Ethylbenzene*	<0.050	0.050	04/21/2024	ND	2.15	108	2.00	3.24	
Total Xylenes*	<0.150	0.150	04/21/2024	ND	6.47	108	6.00	3.76	
Total BTEX	<0.300	0.300	04/21/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	04/22/2024	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	04/20/2024	ND	197	98.4	200	1.94	
DRO >C10-C28*	<10.0	10.0	04/20/2024	ND	193	96.4	200	9.64	
EXT DRO >C28-C36	<10.0	10.0	04/20/2024	ND					

Surrogate: 1-Chlorooctane 71.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 63.5 % 49.1-148

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 ROBBIE RUNNELS
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	04/18/2024	Sampling Date:	04/18/2024
Reported:	04/22/2024	Sampling Type:	Soil
Project Name:	BLACK RIVER 3 FED 1	Sampling Condition:	Cool & Intact
Project Number:	19601	Sample Received By:	Tamara Oldaker
Project Location:	PERMIAN RESOURCES 32.38642-104.284		

Sample ID: WW 2A (H242095-03)

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	04/21/2024	ND	2.17	108	2.00	2.12		
Toluene*	<0.050	0.050	04/21/2024	ND	2.09	105	2.00	1.72		
Ethylbenzene*	<0.050	0.050	04/21/2024	ND	2.15	108	2.00	3.24		
Total Xylenes*	<0.150	0.150	04/21/2024	ND	6.47	108	6.00	3.76		
Total BTEX	<0.300	0.300	04/21/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	04/22/2024	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	04/20/2024	ND	197	98.4	200	1.94	
DRO >C10-C28*	<10.0	10.0	04/20/2024	ND	193	96.4	200	9.64	
EXT DRO >C28-C36	<10.0	10.0	04/20/2024	ND					

Surrogate: 1-Chlorooctane 73.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 64.2 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager



• ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

May 22, 2024

JOEL LOWRY

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: ALLIED STATE 1

Enclosed are the results of analyses for samples received by the laboratory on 05/16/24 15:37.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

Etech Environmental & Safety Solutions
 JOEL LOWRY
 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received: 05/16/2024
 Reported: 05/22/2024
 Project Name: ALLIED STATE 1
 Project Number: 19911
 Project Location: PERMIAN 32.31731, -104.2755

Sampling Date: 05/15/2024
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Alyssa Parras

Sample ID: R360 WEST PIT (H242728-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/18/2024	ND	2.12	106	2.00	1.92	
Toluene*	<0.050	0.050	05/18/2024	ND	2.03	102	2.00	2.09	
Ethylbenzene*	<0.050	0.050	05/18/2024	ND	2.05	102	2.00	2.18	
Total Xylenes*	<0.150	0.150	05/18/2024	ND	5.84	97.4	6.00	2.22	
Total BTX	<0.300	0.300	05/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	05/20/2024	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/17/2024	ND	188	94.1	200	1.63	
DRO >C10-C28*	<10.0	10.0	05/17/2024	ND	203	102	200	0.0320	
EXT DRO >C28-C36	<10.0	10.0	05/17/2024	ND					

Surrogate: 1-Chlorooctane 53.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 56.9 % 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

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



ORDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

Appendix E

Regulatory Correspondence

From: [Pruett, Maria, EMNRD](#)
To: ["robbie@etechnv.com"](mailto:robbie@etechnv.com)
Cc: [Bratcher, Mike, EMNRD](#); ["Tucker, Shelly"](#)
Subject: 2RP-4986 RE: Chisholm Energy - Black River 3 Fed #1
Date: Monday, October 1, 2018 5:25:00 PM

Hello Mr. Runnels,

Thank you for the additional data! This has been assigned 2RP-4986. Because there was not a signed remediation plan, this closure will need to follow the Revised Spill Rule. I have this area in a Critical Karst zone. It is also within 300 ft of an ephemeral stream. Please complete a closure request report including page 6 of the updated C-141 form. Let me know if you have any questions or need further assistance.

Best Regards,

Maria Pruett

Environmental Specialist
N.M. Oil Conservation Division
District 2
811 S. 1st Street
Artesia, NM 88210
Desk: 575 748-1283 X 101
Cell: 575 840-5963
Fax: 575748-9720

From: Pruett, Maria, EMNRD
Sent: Tuesday, September 25, 2018 11:26 AM
To: 'robbie@etechnv.com' <robbie@etechnv.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: RE: Chisholm Energy - Black River 3 Fed #1

Hello Mr. Runnels,

Thank you for the lab results. Please send me some documentation about this site and this spill event I am unable to process this request with the information received.

Best Regards,

Maria Pruett

Environmental Specialist
N.M. Oil Conservation Division
District 2
811 S. 1st Street
Artesia, NM 88210
Desk: 575 748-1283 X 101
Cell: 575 840-5963
Fax: 575748-9720

From: robbie@etechnv.com <robbie@etechnv.com>
Sent: Thursday, September 20, 2018 2:31 PM
To: Pruett, Maria, EMNRD <Maria.Pruett@state.nm.us>
Subject: Chisholm Energy - Black River 3 Fed #1

Ms. Pruett,

There is not a signed C-141 for this on the OCD website. The operator assures me that one was turned in. We have remediated the area with the exception of two small spots that are against the secondary containment of the battery that will be addressed at abandonment. I have attached the analytical for your review. I am asking for permission to backfill the location.

Thank you,

Robbie Runnels

Project Manager



3100 Plains Hwy.
P.O. Box 301
Lovington, NM 88260
p. 575-396-2378 m. 432-999-2746
f. 575-396-1429
robbie@etechnv.com

OCD Permitting

[NOTIFY] Notification Of Sampling (C-141N) Application

Submission Information

Submission ID:	310396	Districts:	Artesia
Operator:	[372165] Permian Resources Operating, LLC	Counties:	Eddy
Description:	Permian Resources Operating, LLC [372165] , BLACK RIVER 3 FED #1 , nMAP1827460454		
Status:	APPROVED		
Status Date:	02/01/2024		
References (2):	30-015-29259, nMAP1827460454		

Forms

This application type does not have attachments.

Questions

Prerequisites

Incident ID (n#)	nMAP1827460454
Incident Name	NMAP1827460454 BLACK RIVER 3 FED #1 @ 30-015-29259
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received

Date Release Discovered	01/03/2018
Surface Owner	Federal

Sampling Event General Information

Please answer all the questions in this group.

What is the sampling surface area in square feet	2,200
What is the estimated number of samples that will be gathered	12
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	02/05/2024
Time sampling will commence	09:00 AM
<div>Warning: Notification can not be less than two business days prior to conducting final sampling.</div>	
Please provide any information necessary for observers to contact samplers	Robbie Runnels 432-282-9143
Please provide any information necessary for navigation to sampling site	32.24263, -104.28401

Acknowledgments

This submission type does not have acknowledgments, at this time.

Comments

No comments found for this submission.

Conditions

Summary:	mflloyd (2/1/2024), Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.
----------	---

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OCD Permitting

[NOTIFY] Notification Of Sampling (C-141N) Application

Submission Information

Submission ID:	333467	Districts:	Artesia
Operator:	[331165] Earthstone Operating, LLC	Counties:	Eddy
Description:	Earthstone Operating, LLC [331165] , BLACK RIVER 3 FED #1 , nMAP1827460454		
Status:	APPROVED		
Status Date:	04/15/2024		
References (2):	30-015-29259, nMAP1827460454		

Forms

This application type does not have attachments.

Questions

Prerequisites

Incident ID (n#)	nMAP1827460454
Incident Name	NMAP1827460454 BLACK RIVER 3 FED #1 @ 30-015-29259
Incident Type	Produced Water Release
Incident Status	Initial C-141 Approved

Date Release Discovered	01/03/2018
Surface Owner	Federal

Sampling Event General Information

Please answer all the questions in this group.

What is the sampling surface area in square feet	1,000
What is the estimated number of samples that will be gathered	5
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/18/2024
Time sampling will commence	08:00 AM

Warning: Notification can not be less than two business days prior to conducting final sampling.

Please provide any information necessary for observers to contact samplers	Abe Buhler (432)967-6199
Please provide any information necessary for navigation to sampling site	From the intersection of National Parks Highway and Black River Village road, go north on National Parks for ~1.1 Mi, Turn East for 0.9 Mi, bare left for approximately 0.3 Mi, bare left, go ~0.5 Mi. Location on right at 32.24263, -104.28401

Acknowledgments

This submission type does not have acknowledgments, at this time.

Comments

No comments found for this submission.

Conditions

Summary:	mtaylorpr (4/15/2024), Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.
----------	--

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Appendix F

Electronic C-141 Supplemental Site Characterization Maps



Legend

Hydrology

NMED Drinking Water Systems

▲

OSE Streams

—

OSE Probable Playas

■

OSW Water Bodys

■

+

-

Home

History

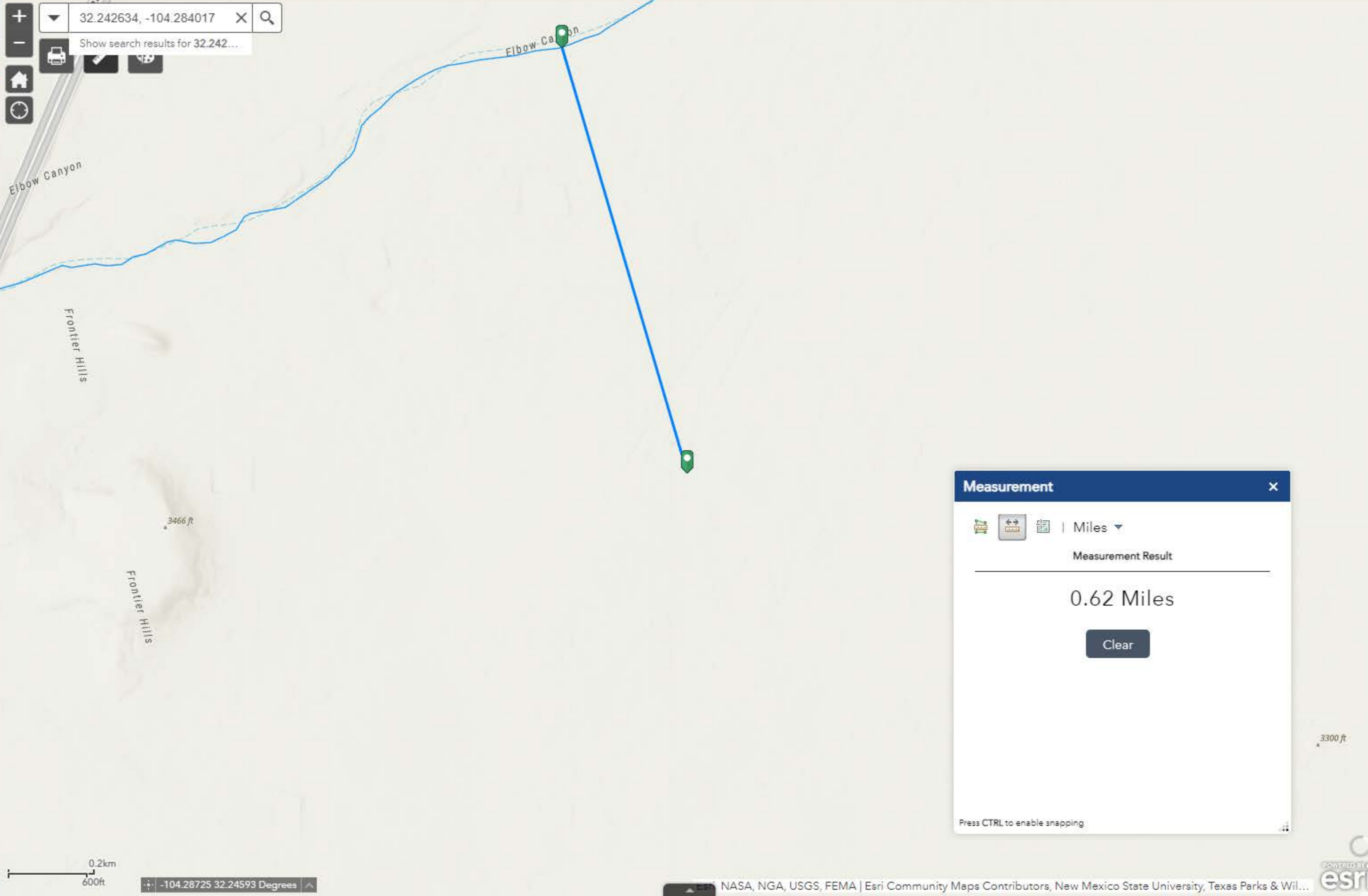
▼

32.242634, -104.284017

X

Q

Show search results for 32.242...



Measurement

Measure

Undo

Clear

Miles

Measurement Result

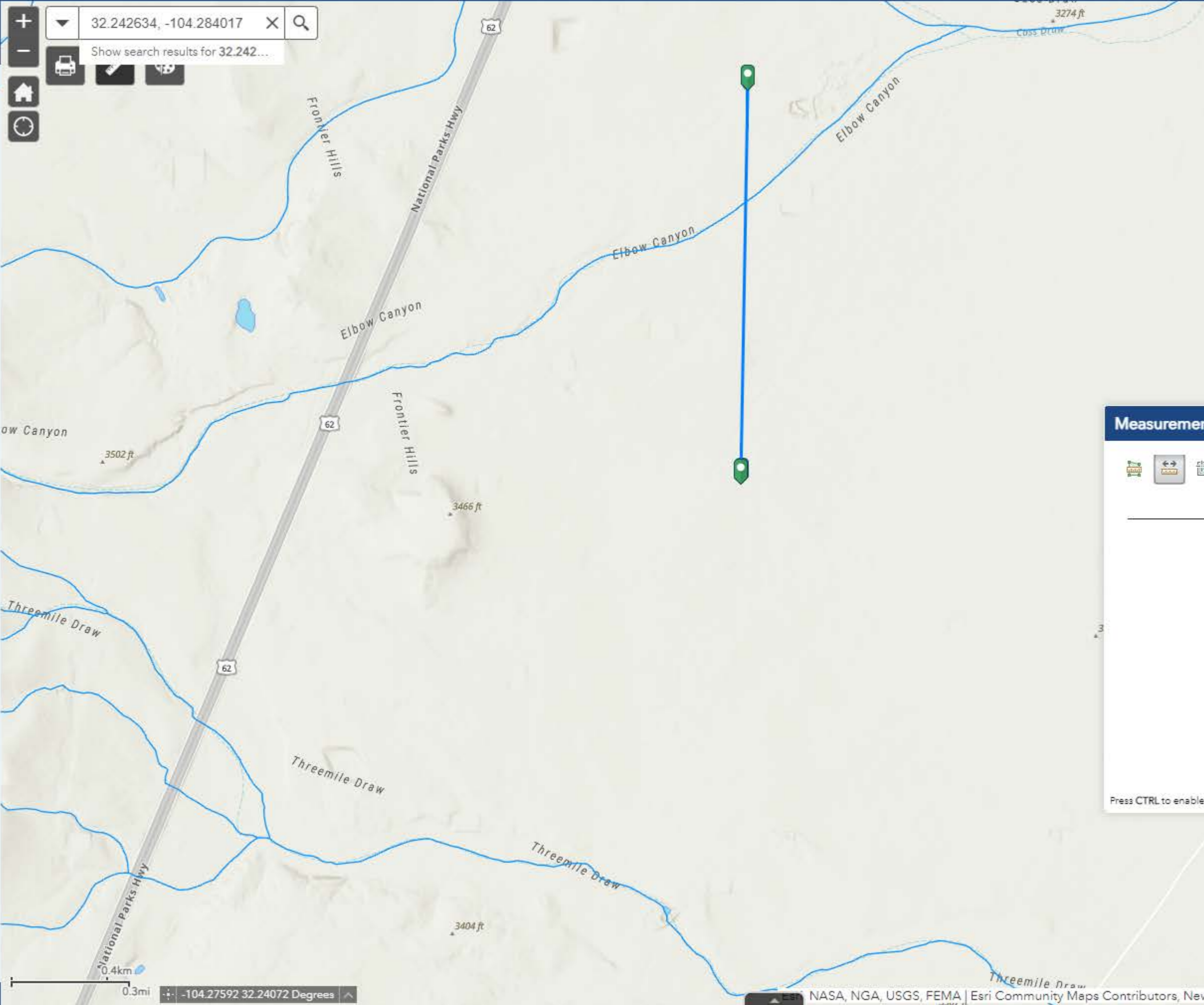
0.62 Miles

Clear

Press CTRL to enable snapping



- Legend
- Hydrology
- NMED Drinking Water Systems
 - OSE Streams
 - OSE Probable Playas
 - OSW Water Bodys



Measurement

Miles

Measurement Result

0.99 Miles

Clear

Press CTRL to enable snapping

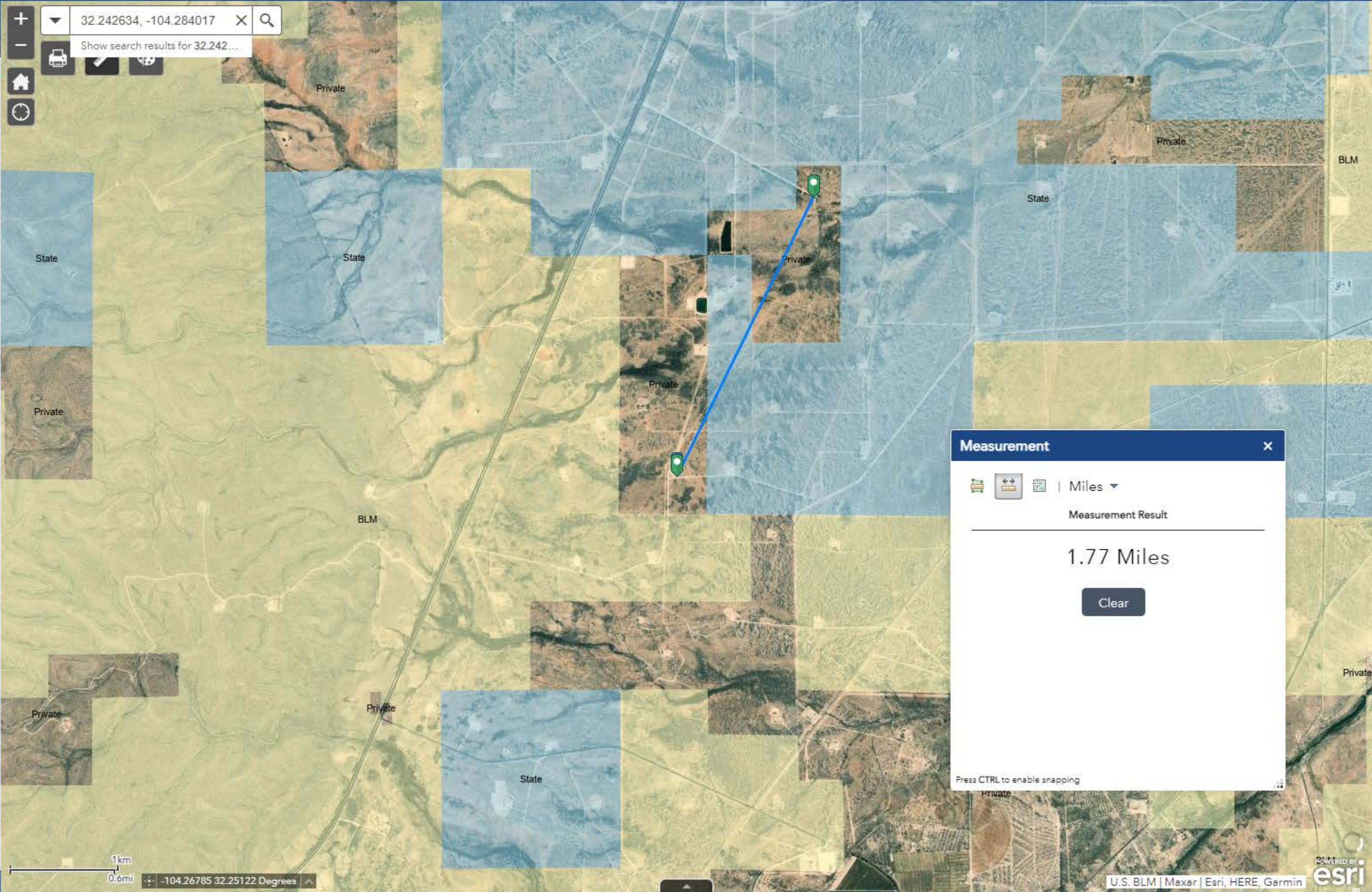


Legend
Mineral and Surface Ownership

- Land Ownership
- BLM
 - BOR
 - DOD
 - DOE
 - FS
 - FWS
 - I
 - NPS
 - P
 - S
 - SGF
 - SP
 - USDA
 - VCNP

32.242634, -104.284017

Show search results for 32.242...



Measurement

Miles

Measurement Result

1.77 Miles

Clear

Press CTRL to enable snapping



Legend

OSE Water PODs

- Active
- Pending
- Changed Location of Well
- Inactive
- Capped
- Plugged
- Unknown

USGS Groundwater wells

USGS Active Monitoring GW Wells



USGS Historical GW Wells



+

-

Home

History

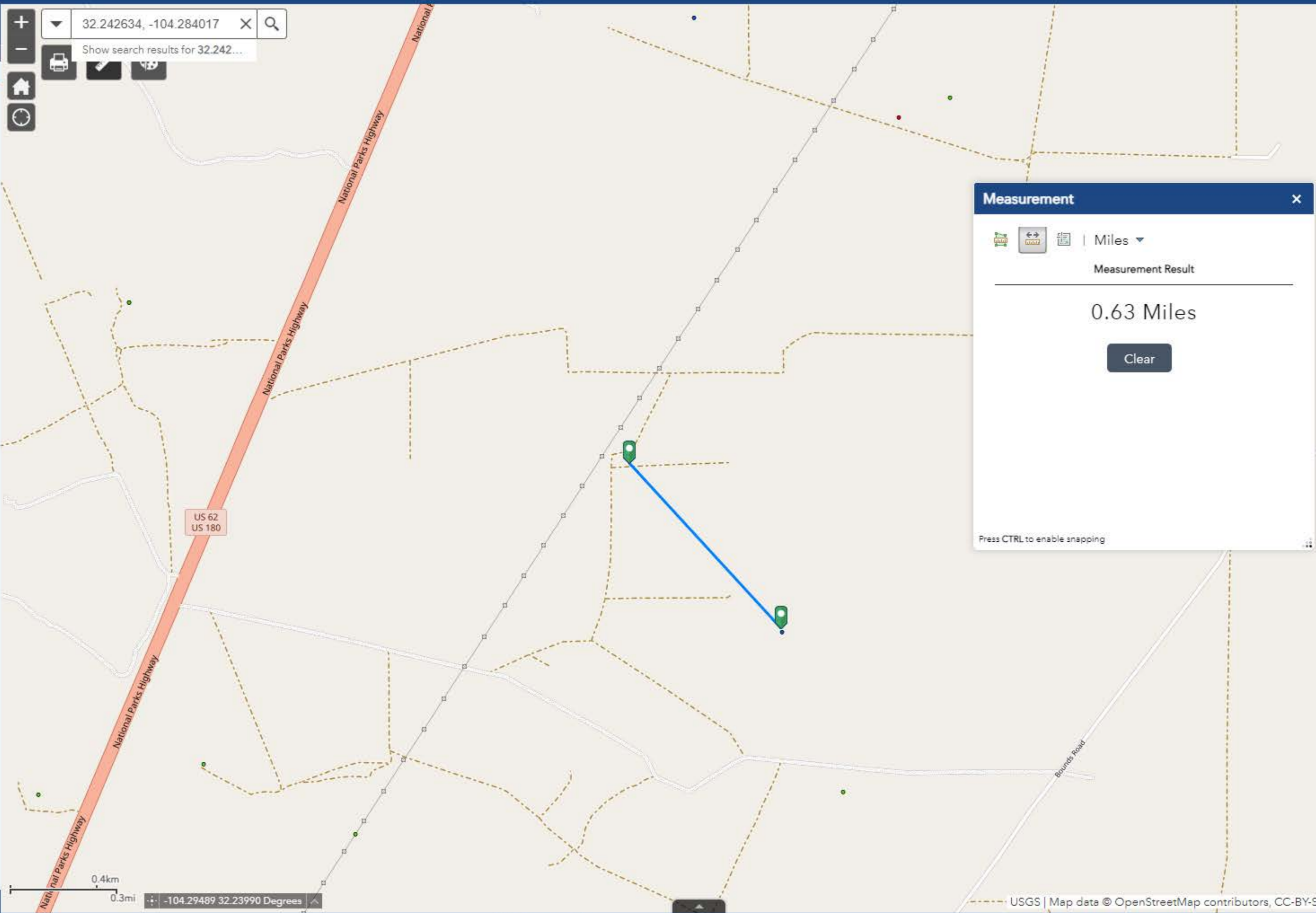
32.242634, -104.284017

Show search results for 32.242...

Print

Measure

Layers



Measurement

Measure

Route

Area

Miles

Measurement Result

0.63 Miles

Clear

Press CTRL to enable snapping



Legend

OSE Water PODs

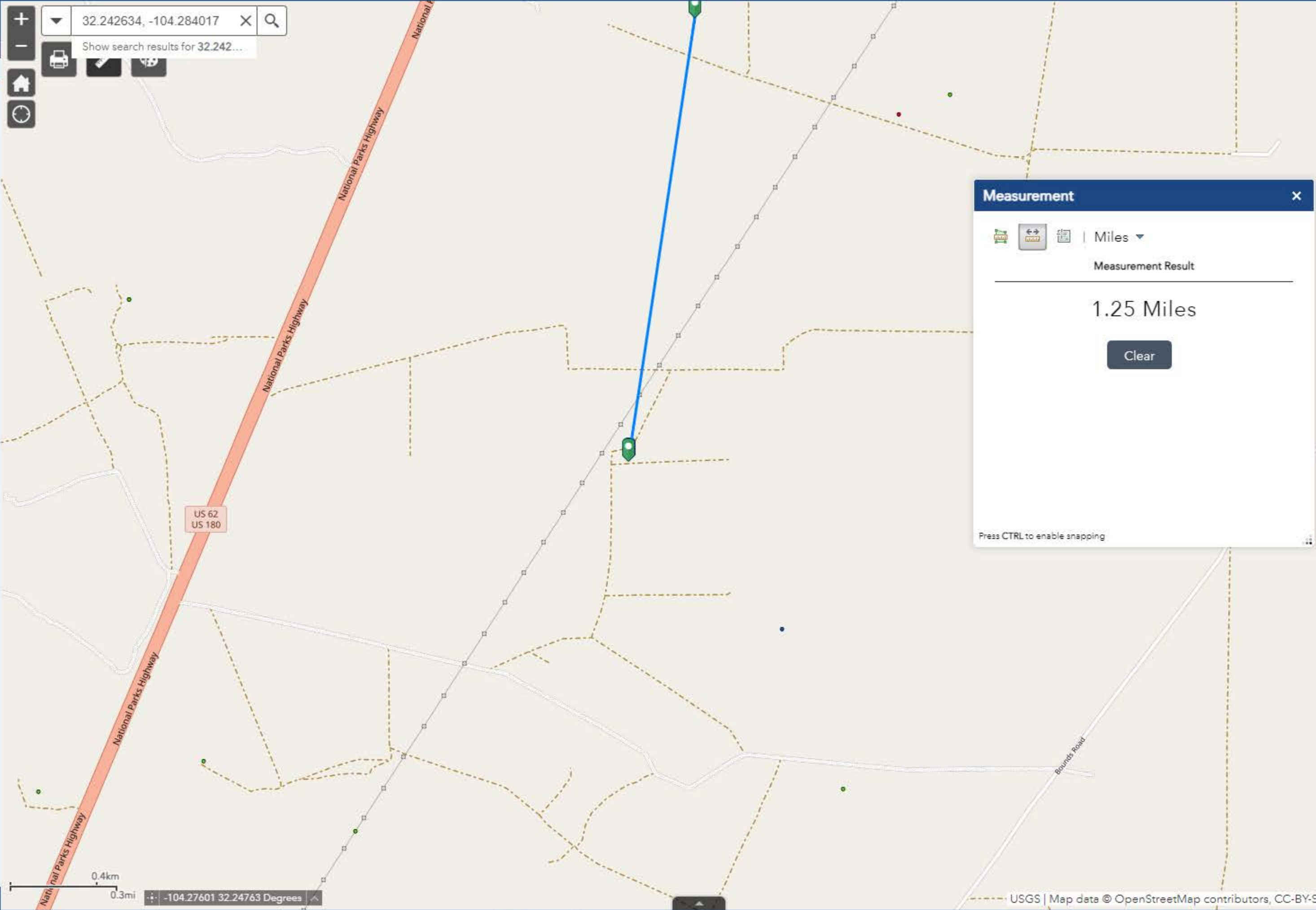
- Active
- Pending
- Changed Location of Well
- Inactive
- Capped
- Plugged
- Unknown

USGS Groundwater wells

USGS Active Monitoring GW Wells



USGS Historical GW Wells



Measurement [X]

[Icons] | Miles [Dropdown]

Measurement Result

1.25 Miles

[Clear]

Press CTRL to enable snapping



Legend

Political Boundaries and Transportation

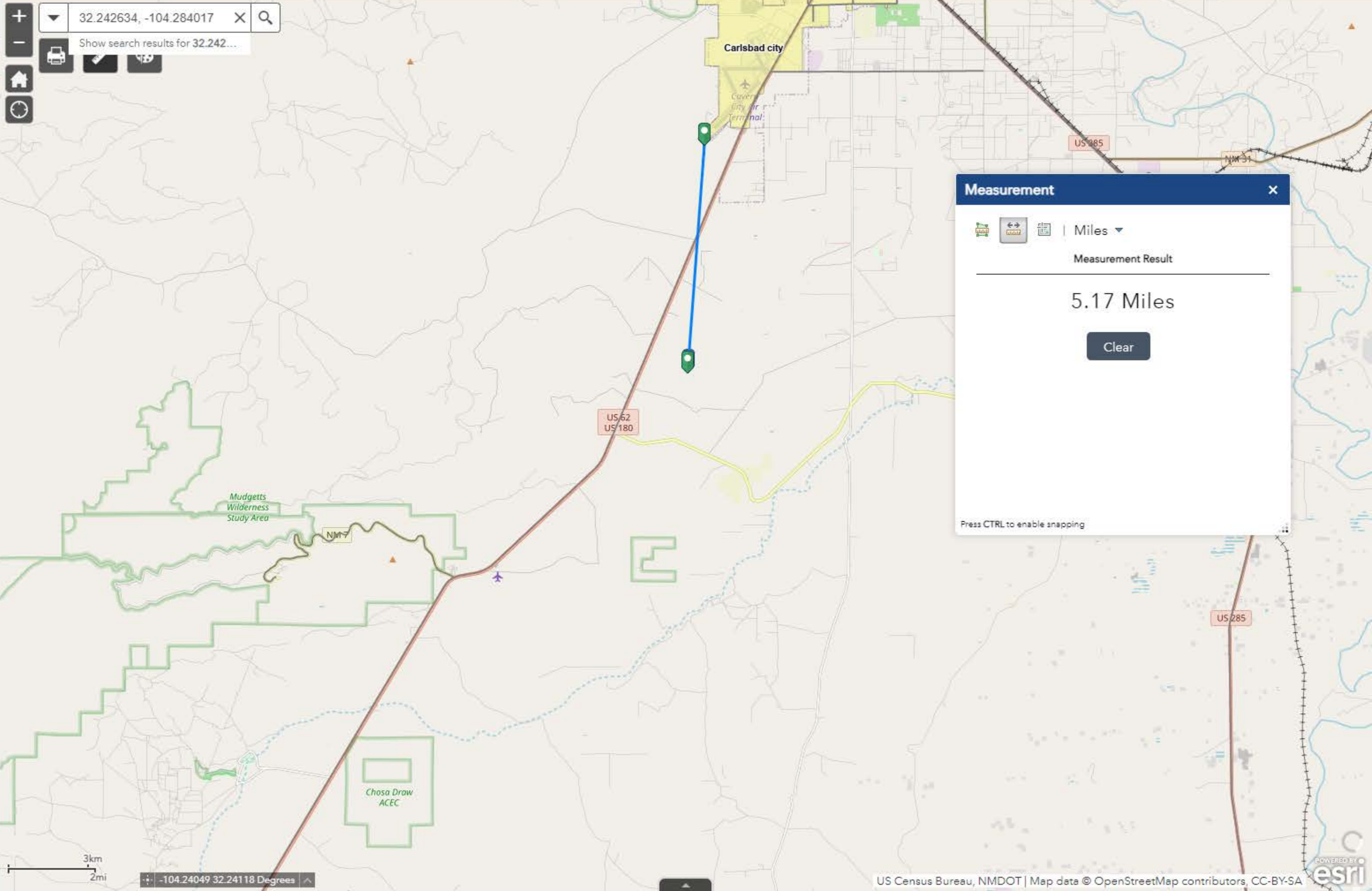
NMDOT Railroads

NMDOT GPS ROADS

New Mexico Towns

32.242634, -104.284017

Show search results for 32.242...



Measurement

Miles

Measurement Result

5.17 Miles

Clear

Press CTRL to enable snapping



BASEMAPS >

MAP LAYERS >

- ☒ Wetlands 1 2
- ☒ Riparian 1 2
- ☐ Riparian Mapping Areas 1 2
- ☒ Data Source 1 2
 - ☐ Source Type
 - ☐ Image Scale
 - ☐ Image Year
- ☐ Areas of Interest 2
- ☐ FWS Managed Lands 1 2
- ☐ Historic Wetland Data 1 2

+

-

Measure

Miles

Measurement Result

0.58 Miles

LEGEND

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Riparian

- Forested/Shrub
- Herbaceous

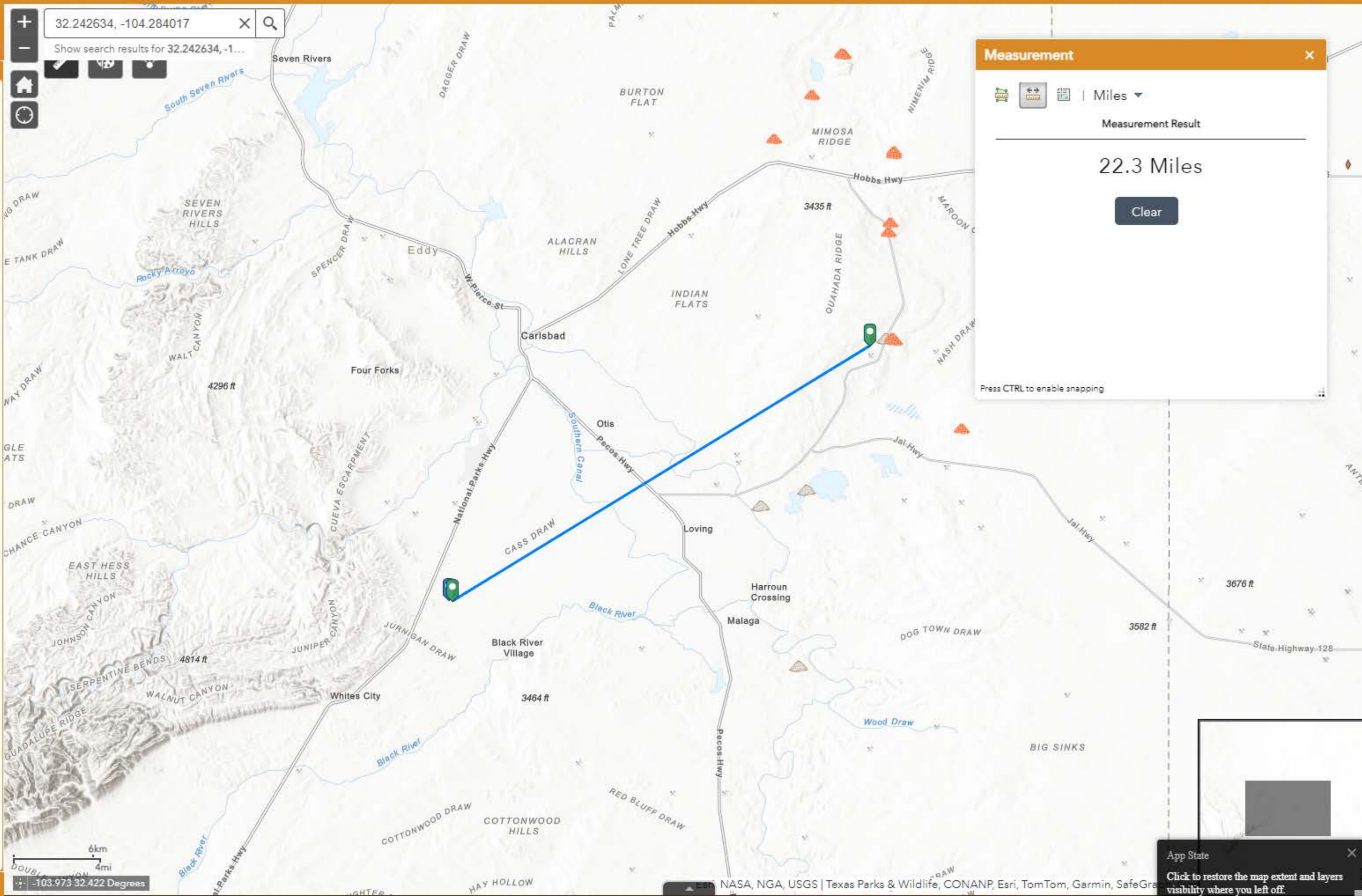
1:9,028
32.246 | -104.282



Legend

Registered Mines

- Aggregate, Stone etc.
- Coal
- Gypsum
- Humate
- Industrial Minerals (Other)
- Metals
- Perlite
- Potash
- PM Pumice
- Red Dog, Scoria
- Salt
- U Uranium
- ZE Zeolites



App State

Click to restore the map extent and layers visibility where you left off.



Legend

Permian Basin Karst Areas

Critical Karst Resource Area

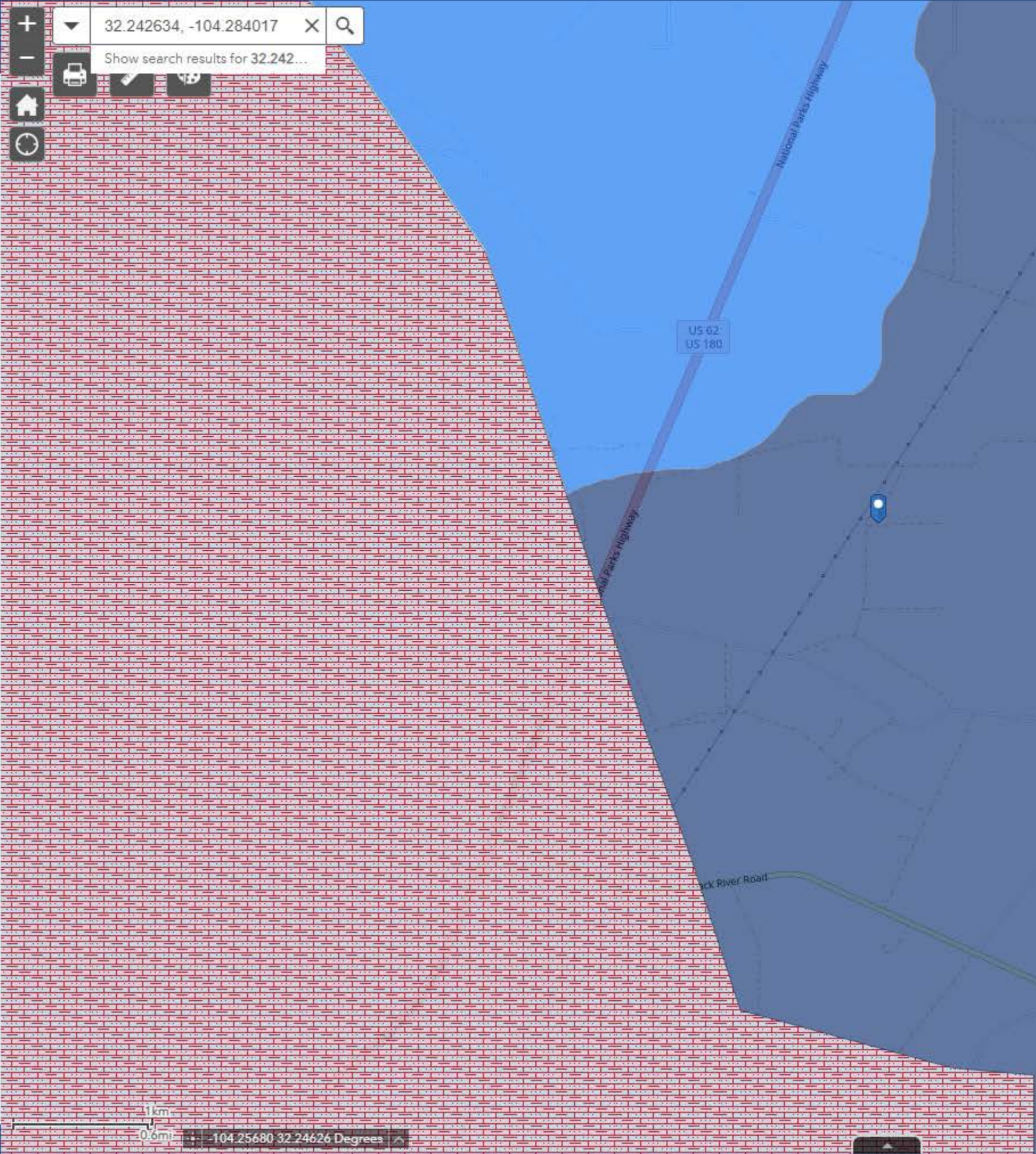
Karst Occurrence Potential

Potential

High

Medium

Low





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

QUESTIONS

Action 349912

QUESTIONS

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID: 372165
	Action Number: 349912
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nMAP1827460454
Incident Name	NMAP1827460454 BLACK RIVER 3 FED #1 @ 30-015-29259
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-015-29259] BLACK RIVER 3 FEDERAL #001

Location of Release Source	
Please answer all the questions in this group.	
Site Name	BLACK RIVER 3 FED #1
Date Release Discovered	01/03/2018
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	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure Valve Produced Water Released: 130 BBL Recovered: 80 BBL Lost: 50 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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QUESTIONS, Page 2

Action 349912

QUESTIONS (continued)

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID:
	372165
	Action Number:
	349912
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	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: Matthew Taylor Title: Environmental Coordinator Email: matthew.taylor@permianres.com Date: 05/31/2024
--	--

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QUESTIONS, Page 3

Action 349912

QUESTIONS (continued)

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID: 372165
	Action Number: 349912
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (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 ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between ½ and 1 (mi.)
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

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

Chloride	(EPA 300.0 or SM4500 Cl B)	1500
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	1520
GRO+DRO	(EPA SW-846 Method 8015M)	282
BTEX	(EPA SW-846 Method 8021B or 8260B)	0.3
Benzene	(EPA SW-846 Method 8021B or 8260B)	0.1

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	02/05/2024
On what date will (or did) the final sampling or liner inspection occur	04/18/2024
On what date will (or was) the remediation complete(d)	04/29/2024
What is the estimated surface area (in square feet) that will be reclaimed	2410
What is the estimated volume (in cubic yards) that will be reclaimed	60
What is the estimated surface area (in square feet) that will be remediated	2410
What is the estimated volume (in cubic yards) that will be remediated	60

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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Santa Fe, NM 87505

QUESTIONS, Page 4

Action 349912

QUESTIONS (continued)

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID:	372165
	Action Number:	349912
	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.)	Yes
Which OCD approved facility will be used for off-site disposal	Not answered.
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Yes
In which state is the disposal taking place	Texas
What is the name of the out-of-state facility	R360 Red Bluff Facility
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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

I hereby agree and sign off to the above statement	Name: Matthew Taylor Title: Environmental Coordinator Email: matthew.taylor@permianres.com Date: 05/31/2024
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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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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
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS, Page 5

Action 349912

QUESTIONS (continued)

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID:
	372165
	Action Number:
	349912
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

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

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QUESTIONS, Page 6

Action 349912

QUESTIONS (continued)

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID:
	372165
	Action Number:
	349912
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	333467
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/18/2024
What was the (estimated) number of samples that were to be gathered	5
What was the sampling surface area in square feet	1000

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	2410
What was the total volume (cubic yards) remediated	60
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	2410
What was the total volume (in cubic yards) reclaimed	60
Summarize any additional remediation activities not included by answers (above)	remediation is complete.

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: Matthew Taylor Title: Environmental Coordinator Email: matthew.taylor@permianres.com Date: 05/31/2024
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QUESTIONS, Page 7

Action 349912

QUESTIONS (continued)

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID:
	372165
	Action Number:
	349912
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

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

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CONDITIONS

Action 349912

CONDITIONS

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID:
	372165
	Action Number:
	349912
Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation approved.	6/3/2024
amaxwell	Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	6/3/2024
amaxwell	• 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.	6/3/2024