State of New Mexico
Oil Conservation Division

Incident ID	nAPP2227233275
District RP	
Facility ID	
Application ID	

Closure

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 (electronic submittals in .pdf format are preferred) 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.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

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.

Printed Name: Jeff Ryan Title: Operations Manager

Signature: [signature] Date: 8/24/23

email: jryan@hlboperating.com Telephone: (432) 683-5216

OCD Only

Received by: Shelly Wells Date: 8/29/2023

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Nelson Velez Date: 12/11/2023

Printed Name: Nelson Velez Title: Environmental Specialist - Adv

Remediation Summary & Soil Closure Request

H.L. Brown Operating, LLC
Federal G #001
Roosevelt County, New Mexico
Unit Letter "D", Section 3, Township 8 South, Range 37 East
Latitude 33.6546570 North, Longitude 103.146285 West
NMOCD Reference No. nAPP2227233275

Prepared By:

Etech Environmental & Safety Solutions, Inc.
6309 Indiana Ave., Ste. D
Lubbock, Texas 79413

Ben J. Arguijo

Zach Conder

ETECH Environmental & Safety Solutions, Inc.

Midland • San Antonio • Lubbock • Hobbs • Lafayette

TABLE OF CONTENTS

1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of H.L. Brown Operating, LLC (henceforth, "H.L. Brown"), has prepared this *Remediation Summary & Soil Closure Request* for the release site known as the Federal G #001. Details of the release are summarized below:

Location of Release Source

Latitude: 33.6546570 Longitude: -103.146285

Provided GPS are in WGS84 format.

Site Name:	Federal G #001	Site Type:	Well Head
Date Release Discovered:	9/7/2022	API # (if applicable):	30-041-20504

Unit Letter	Section	Township	Range	County
"D"	3	8S	37E	Roosevelt

Surface Owner: [X] State [ ] Federal [ ] Tribal [ ] Private (Name New Mexico Dept. of Game & Fish)

Nature and Volume of Release

[X] Crude Oil	Volume Released (bbls) 5	Volume Recovered (bbls) 0
[ ] Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?	[ ] Yes [ ] No [X] N/A
[ ] Condensate	Volume Released (bbls)	Volume Recovered (bbls)
[ ] Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
[ ] Other (describe)	Volume/Weight Released	Volume/Weight Recovered

Cause of Release:
Unknown historic release found during site inspection.

Initial Response

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

Previously submitted portions of the NMOCD Form C-141 are available in the NMOCD Imaging System.

2.0 SITE CHARACTERIZATION

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 Federal G #001 release 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.

What is the shallowest depth to groundwater beneath the area affected by the release?	181'
Did the release impact groundwater or surface water?	[ ] Yes [X] No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	[ ] Yes [X] No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark?	[ ] Yes [X] No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	[ ] Yes [X] No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	[X] Yes [ ] No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	[ ] Yes [X] No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	[ ] Yes [X] No
Are the lateral extents of the release within 300 feet of a wetland?	[ ] Yes [X] No
Are the lateral extents of the release overlying a subsurface mine?	[ ] Yes [X] No
Are the lateral extents of the release overlying an unstable area such as karst geology?	[ ] Yes [X] No
Are the lateral extents of the release within a 100-year floodplain?	[ ] Yes [X] No
Did the release impact areas not on an exploration, development, production or storage site?	[ ] Yes [X] No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish & Wildlife Services (FWS) shapefiles, topographic maps, NMOSE and USGS databases, and aerial imagery. The results are depicted in 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 Standards for the Federal G #001 release site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
181'	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	N/A	N/A
	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

On October 26, 2022, remediation activities commenced at the release site. 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 Hach Quantab ® chloride test kit were utilized to field-screen the extent of impacted soil and to guide the excavation. The sidewalls 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. The excavation was initially advanced vertically to approximately four (4) feet below ground surface (bgs).

On November 8, 2022, Etech advanced a test trench (T.T. 1) in the floor of the excavated area in an effort to determine the vertical extent of impacted soil. During the advancement of the test trench, soil samples were collected and field-screened for concentrations of chloride utilizing a chloride test kit and/or the presence of Volatile Organic Compounds (VOCs) utilizing olfactory/visual senses. Based on field observations and field test data, five (5) delineation soil samples (T.T. 1 @ 4', T.T. 1 @ 6', T.T. 1 @ 8', T.T. 1 @ 10', and T.T. 1 @ 12') were submitted to a certified, commercial laboratory (henceforth, "the laboratory") for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX and TPH concentrations were below the applicable NMOCD Closure Criteria, NMOCD Reclamation Standards, and laboratory method detection limit (MDL) in each of the submitted soil samples. Chloride concentrations exceeded the NMOCD Closure Criterion in each of the submitted soil samples and ranged from 2,800 mg/kg in soil sample T.T. 1 @ 6' to 11,900 mg/kg in soil sample T.T. 1 @ 10'.

On November 28, 2022, test trench T.T. 1 was re-entered and advanced to a total depth of 32 feet bgs in an effort to further investigate the vertical extent of impacted soil. To prevent sloughing and collapse of the open hole, the sidewalls of the trench were advanced horizontally in each cardinal direction, creating a "test pit" measuring approximately 25 feet in length, 25 feet in width, and 18 feet in depth. During the advancement of the test pit/trench, soil samples were collected and field-screened for concentrations of chloride utilizing a chloride test kit and/or the presence of VOCs utilizing olfactory/visual senses. Based on field observations and field test data, four (4) delineation soil samples (T.T. 1 @ 20', T.T. 1 @ 24', T.T. 1 @ 28', and T.T. 1 @ 32') were submitted to the laboratory for analysis of chloride. Laboratory analytical results indicated chloride concentrations exceeded the NMOCD Closure Criterion in each of the submitted soil samples and ranged from 4,040 mg/kg in soil sample T.T. 1 @ 32' to 9,330 mg/kg in soil sample T.T. 1 @ 24'.

On November 30, 2022, test pit/trench T.T. 1 was re-entered and advanced to a total depth of 40 feet bgs in an effort to further investigate the vertical extent of impacted soil. During the advancement of the test pit, soil samples were collected and field-screened for concentrations of chloride utilizing a chloride test kit and/or the presence of VOCs utilizing olfactory/visual senses. Based on field observations and field test data, one (1) delineation soil sample (T.T. 1 @ 40') was submitted to the laboratory for analysis of chloride. Laboratory analytical results indicated the chloride concentration was 48.0 mg/kg and below the NMOCD Closure Criterion. Based on these laboratory analytical results, the vertical extent of impacted soil was adequately defined.

On December 5, 2022, Etech advanced a series of test trenches (NH 1, EH 1, SH 1, and WH 1) along the inferred edges of the affected area in an effort to determine the horizontal extent of impacted soil. The test trenches were each advanced to a total depth of 18 feet bgs. During the advancement of the test trenches, soil samples were collected and field-screened for concentrations of chloride utilizing a chloride test kit and/or the presence of VOCs utilizing olfactory/visual senses. Based on field observations and field test data, four (4) delineation soil samples (NH 1 @ 18', EH 1 @ 18', SH 1 @ 18', and WH 1 @ 18') 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 in each of the submitted soil samples. BTEX and TPH concentrations were also below the laboratory MDL. Chloride concentrations ranged from 16.0 mg/kg in soil sample NH 1 @ 18' to 224 mg/kg in soil sample WH 1 @ 18'. Based on these laboratory analytical results, the horizontal extent of impacted soil was adequately defined.

On March 29, 2023, based on laboratory analytical results, field observations, and in-situ chloride migration modeling, H.L. Brown submitted a *Remediation Summary & Variance Request* to the NMOCD requesting a variance to install a 20-mil, string-reinforced liner at approximately six (6) feet bgs atop impacted soil affected above the NMOCD Closure Criteria. The variance request was subsequently approved by the NMOCD, with no added stipulations.

Please reference the *Remediation Summary & Variance Request* (henceforth, "*Variance Request*"), which is available in the NMOCD Imaging System, for additional details regarding the in-situ chloride migration modeling, variance request, and proposed remediation activities.

On June 19, 2023, Etech resumed remediation activities at the release site. In accordance with the NMOCD-approved Variance Request, the uppermost six (6) feet of the test pit sidewalls were advanced horizontally to the areas characterized by test trenches NH 1, EH 1, SH 1, and WH 1. Excavated soil was stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal.

On June 21, 2023, Etech collected four (4) composite confirmation soil samples (NW1, EW1, SW1, and WW1) from the sidewalls of the excavated area. The 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. BTEX and TPH concentrations were also less than the applicable laboratory MDL. Chloride concentrations ranged from less than the laboratory MDL in soil samples EW1 and SW1 to 144 mg/kg in soil sample WW1.

Upon receipt of laboratory analytical results from the confirmation soil samples, the test pit was backfilled with locally sourced, non-impacted material to approximately six (6) feet bgs. A 20-mil, string-reinforced liner was installed on the floor of the excavated area atop impacted soil affected above the NMOCD Closure Criteria. Approximately six (6) inches of pad material was installed both above and below the liner in an effort to maintain its integrity during backfilling activities. The liner was sloped to facilitate shedding of moisture outside both the footprint of the excavated area and the maximum horizontal extent of impacted soil. This engineered control is designed to inhibit the vertical migration of chloride contamination remaining in-situ.

The final dimensions of the excavated area were approximately 34 feet in length, 28 to 30 feet in width, and six (6) to 18 feet in depth. During the course of remediation activities, Etech transported approximately 544 cubic yards of impacted soil to an NMOCD-permitted surface waste facility for disposal and imported approximately 360 cubic yards of locally sourced, non-impacted material to the site for use as backfill.

The extent of the excavated area/liner and the locations of the test trenches are depicted in Figure 3, "Site & Sample Location Map". Soil chemistry data is summarized in Table 1. Field data is provided in Appendix B. General photographs of the site are provided in Appendix C. Laboratory analytical reports are provided in Appendix D.

5.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Following installation of the aforementioned liner, the excavated area was backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected area was contoured and compacted to fit the needs of the facility and to achieve erosion control, stability, and preservation of surface water flow to the extent practicable.

The release was limited to the production pad of an active well and tank battery. Final reclamation and re-vegetation of the affected area will be conducted in accordance with Section 19.15.29.13 NMAC upon decommission and abandonment of the facility.

6.0 SOIL CLOSURE REQUEST

Remediation activities were conducted in accordance with the NMOCD-approved *Variance Request.* Impacted soil affected above the NMOCD Closure Criteria and NMOCD Reclamation Standards was excavated to the extent practicable and transported to an NMOCD-permitted disposal facility. Laboratory analytical results from confirmation soil samples indicate in-situ concentrations of BTEX and TPH are below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards.

A 20-mil, string-reinforced liner was installed on the floor of the excavated area, at approximately six (6) feet bgs, atop impacted soil affected above the NMOCD Closure Criteria. This engineered control is designed to inhibit the vertical migration of chloride contamination remaining in-situ.

Based on laboratory analytical results and field activities conducted to date, Etech recommends H.L. Brown provide copies of this *Remediation Summary & Soil Closure Request* to the appropriate agencies and request closure be granted to the Federal G #001 release site.

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 H.L. Brown Operating, LLC. Use of the information contained in this report is prohibited without the consent of Etech and/or H.L. Brown Operating, LLC.

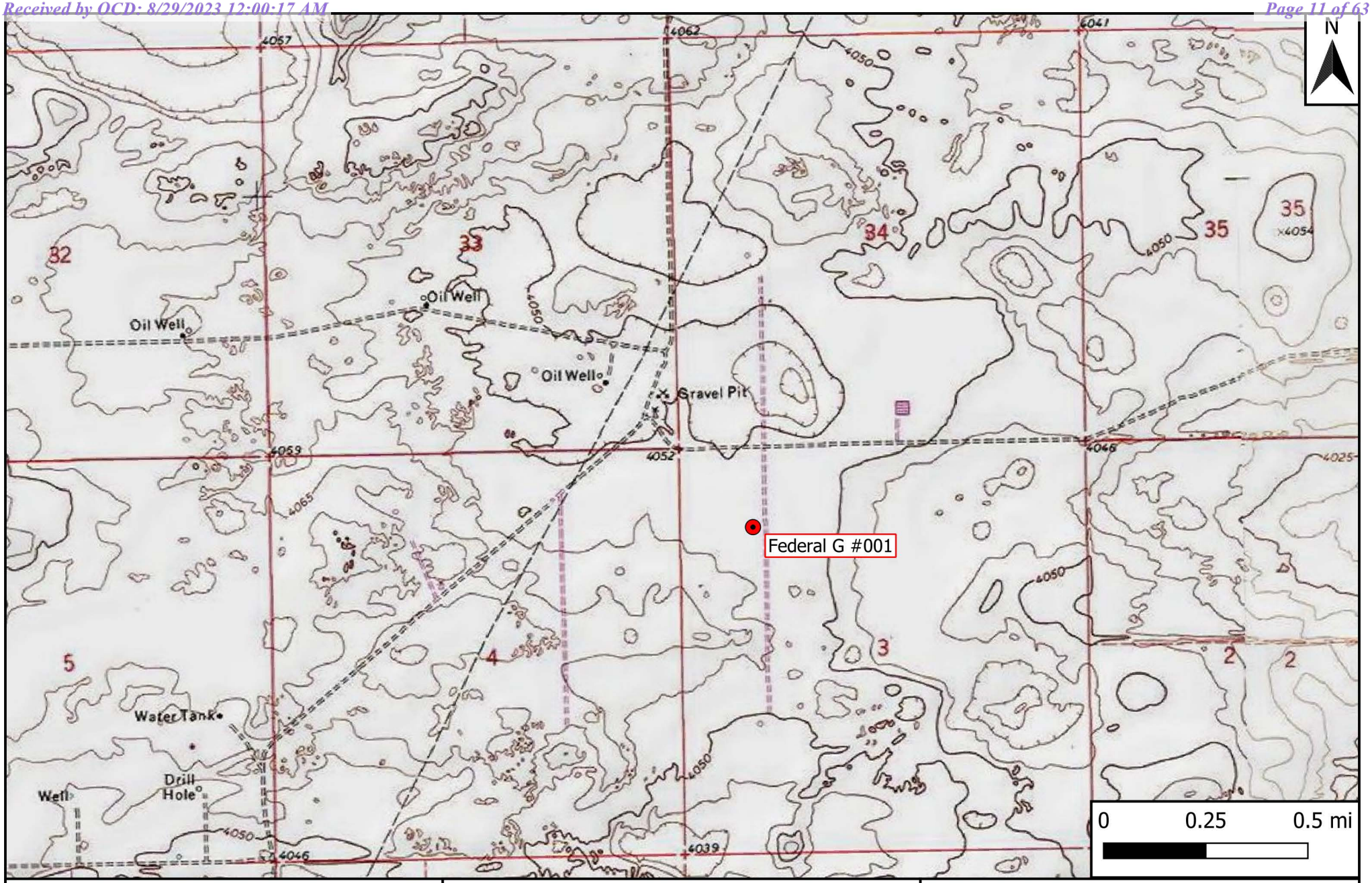
8.0 DISTRIBUTION

H.L. Brown Operating, LLC
300 West Louisiana
Midland, TX 79702-2237

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

H.L. Brown Operating, LLC

Federal G #001

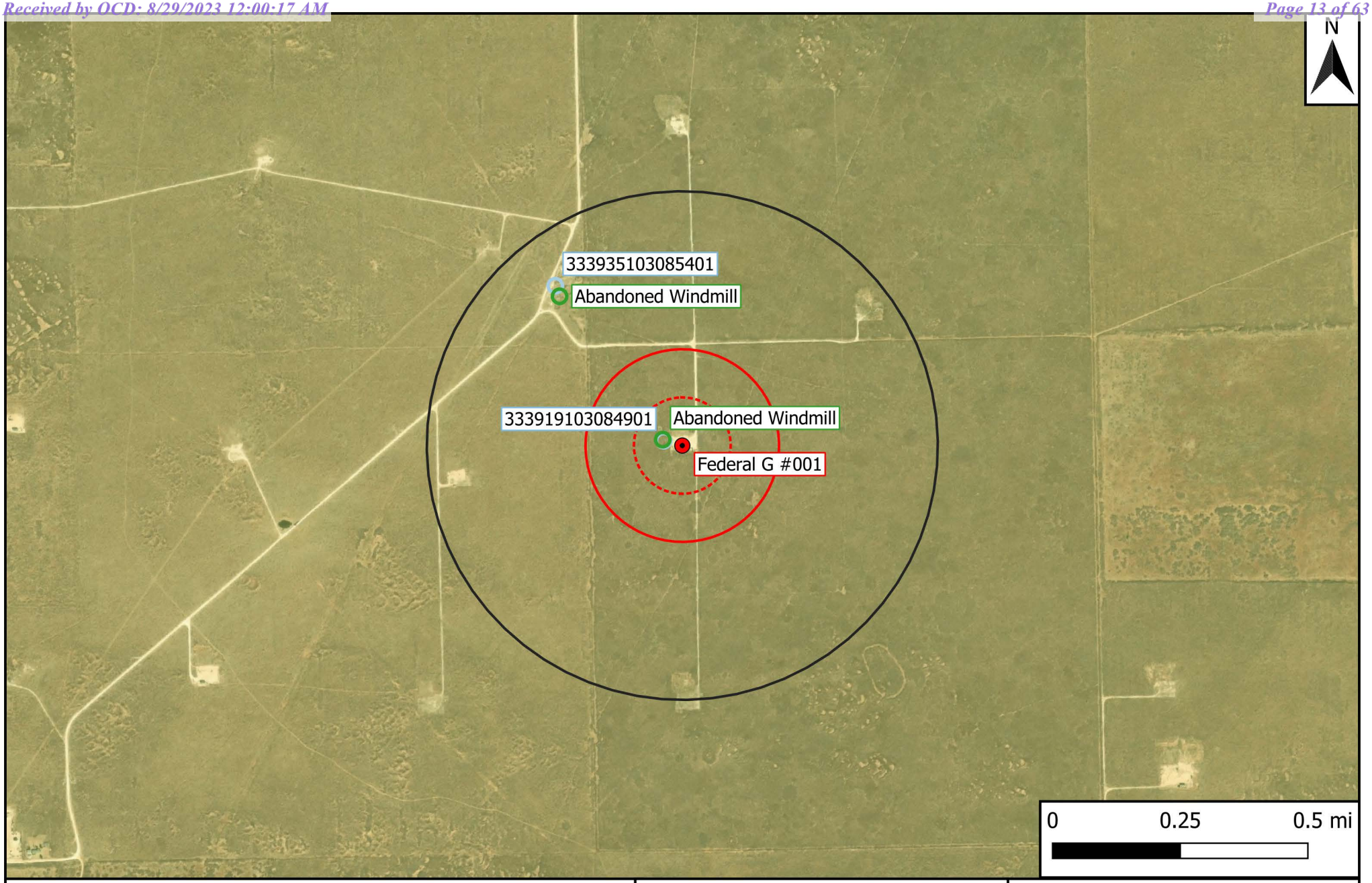
GPS: 33.654657, -103.146285

Roosevelt County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: zc Date: 1/9/23

Figure 2
Site Characterization Map



Legend

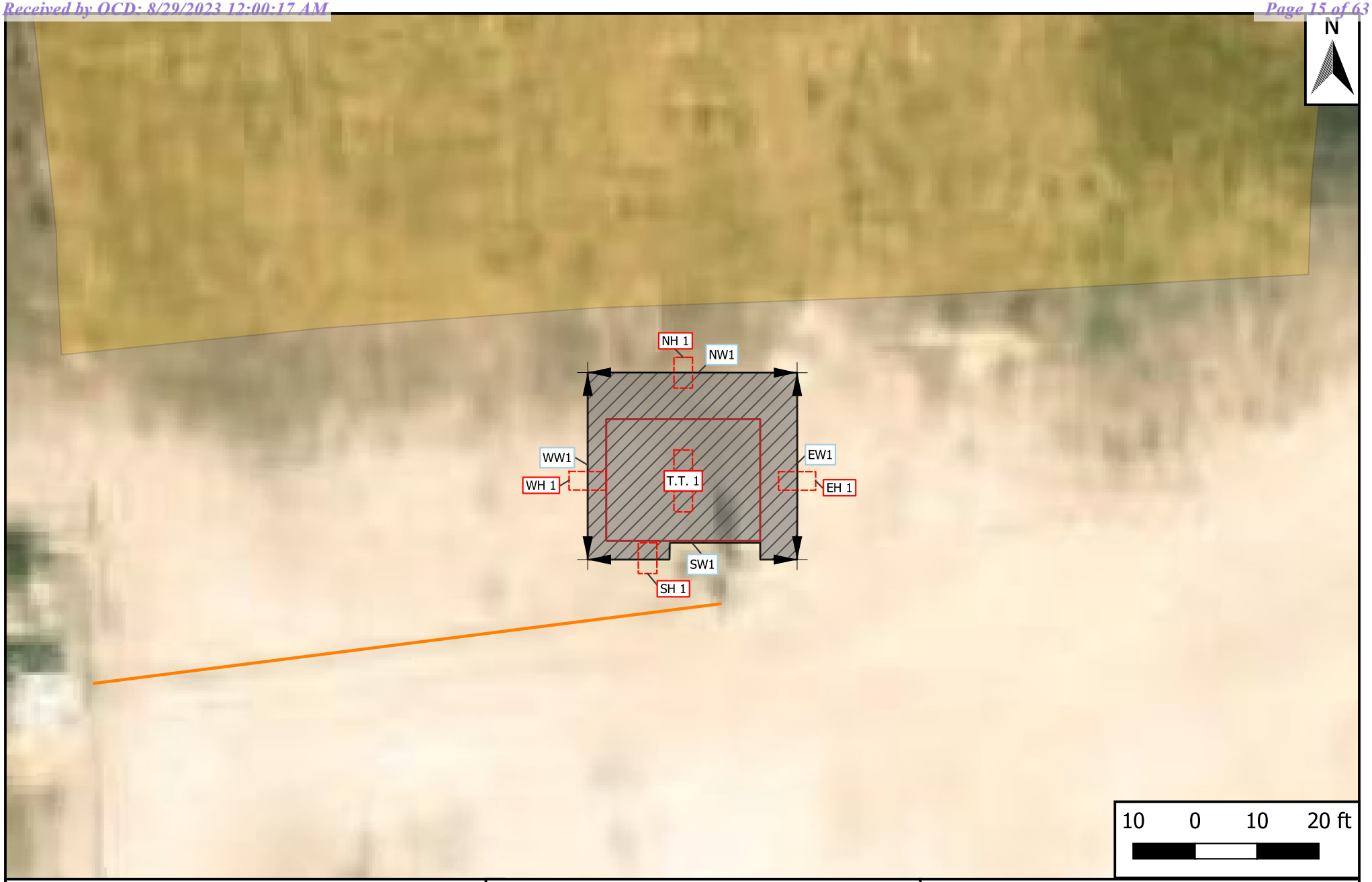
- Site Location
- Well - NMOSE
- Well - USGS
- Well - Exploratory/Monitor
- Potash Mine Workings
- 1% Annual Flood Chance
- Emergent/Forested Wetlands
- Freshwater Pond/Lake
- Karst Potential (Low/Med./High)
- Riverine
- 500-Ft Radius
- 1,000-Ft Radius
- 0.5-Mi Radius
- Municipal Boundary

Figure 2
Site Characterization Map
H.L. Brown Operating, LLC
Federal G #001
GPS: 33.654657, -103.146285
Roosevelt County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: zc Date: 3/9/23

Figure 3
Site & Sample Location Map



Legend

- Excavation Extent
- Historical Reserve Pit
- Liner (≈6' bgs)
- Pipeline
- Composite Wall Sample
- Test Pit (≈18' bgs)
- Test Trench

Figure 3
Site & Sample Location Map
H.L. Brown Operating, LLC
Federal G #001
GPS: 33.654657, -103.146285
Roosevelt County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: zc Date: 8/23/23

Table 1
Concentrations of BTEX, TPH & Chloride in Soil

Table 1
Concentrations of BTEX, TPH & Chloride in Soil
H.L. Brown Operating, LLC
Federal G #001
NMOCD Ref. #: nAPP2227233275

NMOCD Closure Criteria				**10**	**50**	**N/A**	**N/A**	**N/A**	**N/A**	**100**	**600**
NMOCD Reclamation Standard				**10**	**50**	**N/A**	**N/A**	**N/A**	**N/A**	**100**	**600**
				SW 846 8021B		**SW 846 8015M Ext.**					**4500 Cl**
Sample ID	**Date**	**Depth (Feet)**	**Soil Status**	**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 Samples											
T.T. 1 @ 4'	11/8/2022	4	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**7,200**
T.T. 1 @ 6'	11/8/2022	6	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**2,800**
T.T. 1 @ 8'	11/8/2022	8	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**11,300**
T.T. 1 @ 10'	11/8/2022	10	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**11,900**
T.T. 1 @ 12'	11/8/2022	12	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	**11,800**
T.T. 1 @ 20'	11/28/2022	20	In-Situ	-	-	-	-	-	-	-	**7,680**
T.T. 1 @ 24'	11/28/2022	24	In-Situ	-	-	-	-	-	-	-	**9,330**
T.T. 1 @ 28'	11/28/2022	28	In-Situ	-	-	-	-	-	-	-	**7,200**
T.T. 1 @ 32'	11/28/2022	32	In-Situ	-	-	-	-	-	-	-	**4,040**
T.T. 1 @ 40'	11/30/2022	40	In-Situ	-	-	-	-	-	-	-	48.0
NH 1 @ 18'	12/5/2022	18	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
EH 1 @ 18'	12/5/2022	18	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
SH 1 @ 18'	12/5/2022	18	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
WH 1 @ 18'	12/5/2022	18	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
Excavation Samples											
NW1	6/21/2023	0-6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
EW1	6/21/2023	0-6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16
SW1	6/21/2023	0-6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16
WW1	6/21/2023	0-6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144

Dash (-): Sample not analyzed for that constituent.
Bold: NMOCD Closure Criteria exceedance.
Red: NMOCD Reclamation Standard exceedance.

Appendix A
Depth to Groundwater Information

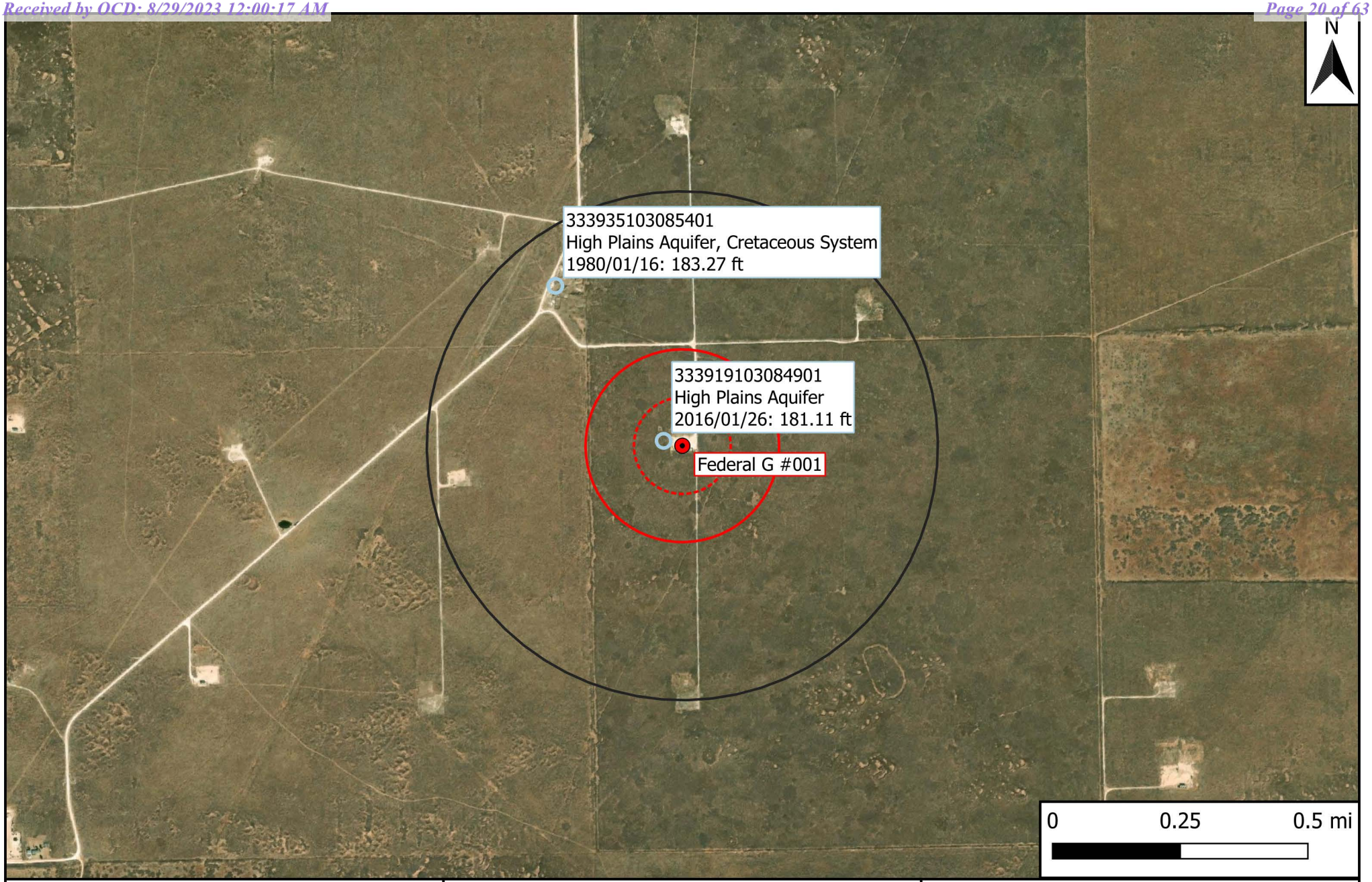
New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 671889.86 **Northing (Y):** 3725414.63 **Radius:** 3220



Legend
- Site Location
- Well - USGS
- 500-Ft Radius
- 1,000-Ft Radius
- 0.5-Mi Radius

Figure 4
USGS Well Proximity Map
H.L. Brown Operating, LLC
Federal G #001
GPS: 33.654657, -103.146285
Roosevelt County

eTECH Environmental & Safety Solutions, Inc.

Drafted: bja Checked: zc Date: 1/9/23

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click forNews Bulletins

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 333919103084901

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 333919103084901 08S.37E.03.11322

Roosevelt County, New Mexico
Latitude 33°39'17.3", Longitude 103°08'48.9" NAD83
Land-surface elevation 4,055 feet above NAVD88
The depth of the well is 184 feet below land surface.
This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1995-02-08		D	72019	177.76			1	S	USGS	S	A
2016-01-26	18:00 UTC	m	72019	181.11			1	S	USGS	S	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	m	Date is accurate to the Minute
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Measuring agency	USGS	U.S. Geological Survey
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

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: 2023-01-16 21:12:18 EST
0.3 0.25 nadww01

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click forNews Bulletins

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 333935103085401

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 333935103085401 07S.37E.33.444213

Roosevelt County, New Mexico
Latitude 33°39'33", Longitude 103°09'00" NAD27
Land-surface elevation 4,049.00 feet above NGVD29
The depth of the well is 208 feet below land surface.
This well is completed in the High Plains aquifer (N100HGHPLN) national aquifer.
This well is completed in the Cretaceous System (210CRCS) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1980-01-16		D	72019	183.27			1	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

Appendix B
Field Data

eTECH Environmental & Safety Solutions, Inc.

Sample Log

Date: 10/26/22

Project: Federal G 001

Project Number: 16854 Latitude: 33.654722 Longitude: 600/100 -103.146262

Sample ID	PID/Odor	Chloride Conc.	GPS
FL 1 @ 1'	light	7.2 H.S. 9372	
FL 1 @ 3'	-	6.0 H.S. 5904	
NW 1	-	60 5904	
EW 1	-	7.8 58 5.0 11916, 5464, 3992	
SW 1	-	4.0, 7.0, 7.8 628, 1916, 2548	
WW 1	-	5.0, 4.9, 4.4 3992, 748, 748	
FL 1 @ 5'	-	7.8 2548	
FL 1 @ 7'	-	7.8 2548	
FL 1 @ 9'	-	7.8 2548	
FL 1 @ 10'	-	5.8 H.S. 5464	
FL 1 @ 12'	-	6.0 H.S. 5904	
FL 1 @ 20'		17,744	
FL 1 @ 22'		6,468	
FL 1 @ 24'		3,676	
FL 1 @ 26'		4,324	
FL 1 @ 28'		5,080	
FL 1 @ 30'		4,324	
FL 1 @ 32'		2,624	
TT 1 @ 34'		1,808	
TT 1 @ 36'		1,604	
TT 1 @ 38'		~~439~~ 1008	
TT 1 @ 40'		432	
EH @ 18'		2.8	

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

Appendix C
Photographic Log

Photographic Log

Photo Number: 1	
Photo Direction: North-Northeast	
Photo Description: View of the affected area.	

Photo Number: 2	
Photo Direction: Northeast	
Photo Description: View of the affected area.	

Photographic Log

Photo Number: 3 **Photo Direction:** Southwest **Photo Description:** View of the excavated area & test pit/trench.	

Photo Number: 4 **Photo Direction:** South **Photo Description:** View of the advancement of test trench T.T. 1.	

Photographic Log

Photo Number: 5 **Photo Direction:** West **Photo Description:** View of the excavated area.	

Photo Number: 6 **Photo Direction:** Northwest **Photo Description:** View of the installed liner.	

Photographic Log

Photo Number: 7	
Photo Direction: West	
Photo Description: View of the remediated area after backfill and regrading.	

Appendix D
Laboratory Analytical Reports

CARDINAL Laboratories

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

November 14, 2022

JOEL LOWRY

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: FEDERAL G 001

Enclosed are the results of analyses for samples received by the laboratory on 11/10/22 8:59.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	11/10/2022	Sampling Date:	11/08/2022
Reported:	11/14/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Shalyn Rodriguez
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: T.T. 1 @ 4' (H225314-01)

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	11/12/2022	ND	2.01	101	2.00	6.63	
Toluene*	<0.050	0.050	11/12/2022	ND	2.11	105	2.00	5.27	
Ethylbenzene*	<0.050	0.050	11/12/2022	ND	2.01	101	2.00	4.22	
Total Xylenes*	<0.150	0.150	11/12/2022	ND	6.06	101	6.00	3.01	
Total BTEX	<0.300	0.300	11/12/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *87.9 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7200**	16.0	11/11/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/11/2022	ND	193	96.3	200	3.74	
DRO >C10-C28*	<10.0	10.0	11/11/2022	ND	203	102	200	6.14	
EXT DRO >C28-C36	<10.0	10.0	11/11/2022	ND					

Surrogate: 1-Chlorooctane *96.3 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *111 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/10/2022	Sampling Date:	11/08/2022
Reported:	11/14/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Shalyn Rodriguez
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: T.T. 1 @ 6' (H225314-02)

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	11/12/2022	ND	2.01	101	2.00	6.63	
Toluene*	<0.050	0.050	11/12/2022	ND	2.11	105	2.00	5.27	
Ethylbenzene*	<0.050	0.050	11/12/2022	ND	2.01	101	2.00	4.22	
Total Xylenes*	<0.150	0.150	11/12/2022	ND	6.06	101	6.00	3.01	
Total BTEX	<0.300	0.300	11/12/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *87.8 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2800**	16.0	11/11/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/11/2022	ND	193	96.3	200	3.74	
DRO >C10-C28*	<10.0	10.0	11/11/2022	ND	203	102	200	6.14	
EXT DRO >C28-C36	<10.0	10.0	11/11/2022	ND					

Surrogate: 1-Chlorooctane *98.0 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *107 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/10/2022	Sampling Date:	11/08/2022
Reported:	11/14/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Shalyn Rodriguez
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: T.T. 1 @ 8' (H225314-03)

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	11/12/2022	ND	2.01	101	2.00	6.63	
Toluene*	<0.050	0.050	11/12/2022	ND	2.11	105	2.00	5.27	
Ethylbenzene*	<0.050	0.050	11/12/2022	ND	2.01	101	2.00	4.22	
Total Xylenes*	<0.150	0.150	11/12/2022	ND	6.06	101	6.00	3.01	
Total BTEX	<0.300	0.300	11/12/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *85.3 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11300**	16.0	11/11/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/11/2022	ND	193	96.3	200	3.74	
DRO >C10-C28*	<10.0	10.0	11/11/2022	ND	203	102	200	6.14	
EXT DRO >C28-C36	<10.0	10.0	11/11/2022	ND					

Surrogate: 1-Chlorooctane *90.8 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *100 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/10/2022	Sampling Date:	11/08/2022
Reported:	11/14/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Shalyn Rodriguez
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: T.T. 1 @ 10' (H225314-04)

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	11/12/2022	ND	2.01	101	2.00	6.63	
Toluene*	<0.050	0.050	11/12/2022	ND	2.11	105	2.00	5.27	
Ethylbenzene*	<0.050	0.050	11/12/2022	ND	2.01	101	2.00	4.22	
Total Xylenes*	<0.150	0.150	11/12/2022	ND	6.06	101	6.00	3.01	
Total BTEX	<0.300	0.300	11/12/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *87.3 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11900**	16.0	11/11/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/11/2022	ND	193	96.3	200	3.74	
DRO >C10-C28*	<10.0	10.0	11/11/2022	ND	203	102	200	6.14	
EXT DRO >C28-C36	<10.0	10.0	11/11/2022	ND					

Surrogate: 1-Chlorooctane *85.1 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *91.9 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/10/2022	Sampling Date:	11/08/2022
Reported:	11/14/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Shalyn Rodriguez
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: T.T. 1 @ 12' (H225314-05)

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	11/12/2022	ND	2.01	101	2.00	6.63	
Toluene*	<0.050	0.050	11/12/2022	ND	2.11	105	2.00	5.27	
Ethylbenzene*	<0.050	0.050	11/12/2022	ND	2.01	101	2.00	4.22	
Total Xylenes*	<0.150	0.150	11/12/2022	ND	6.06	101	6.00	3.01	
Total BTEX	<0.300	0.300	11/12/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *82.9 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**11800**	16.0	11/11/2022	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/11/2022	ND	193	96.3	200	3.74	
DRO >C10-C28*	<10.0	10.0	11/11/2022	ND	203	102	200	6.14	
EXT DRO >C28-C36	<10.0	10.0	11/11/2022	ND					

Surrogate: 1-Chlorooctane *82.8 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *88.0 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1/1

Company Name:	Etech Environmental & Safety Solutions	BILL TO	
Project Manager:	Joe L Lowry	P.O. #:	
Address:	2617 West Marland	Company:	H.L. Brown
City:	Hobbs	State: NM Zip: 88240	Attn:
Phone #:	(575) 264-9884	Fax #:	Address:
Project #:	16854	Project Owner:	City:
Project Name:	Federal G 001		State: Zip:
Project Location:	Rural Roosevelt Co, NM		Phone #:
Sampler Name:	Miguel Ramirez		Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	ANALYSIS REQUEST: Chloride	TPH (8015M)	BTEX (8021B)
H325314																	
1	T.T. 1@4'	G	1			X					X		11/9/22		X	X	X
2	T.T. 1@6'																
3	T.T. 1@8'																
4	T.T. 1@10'																
5	T.T. 1@12'																

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

Relinquished By:	Date: 11/10/22	Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #:
	Time: 0859		Fax Result: ☐ Yes ☑ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: email results pm@etechenv.com Standard
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	-4.1°C 0.1°C -4.7°C #113	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) SR

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

CARDINAL Laboratories

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

November 30, 2022

JOEL LOWRY

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: FEDERAL G 001

Enclosed are the results of analyses for samples received by the laboratory on 11/28/22 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	11/28/2022	Sampling Date:	11/28/2022
Reported:	11/30/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	** (See Notes)
Project Number:	16854	Sample Received By:	Shalyn Rodriguez
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: T.T. 1 @ 20' (H225573-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7680**	16.0	11/29/2022	ND	448	112	400	0.00	

Sample ID: T.T. 1 @ 24' (H225573-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9330**	16.0	11/29/2022	ND	448	112	400	0.00	

Sample ID: T.T. 1 @ 28' (H225573-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7200**	16.0	11/29/2022	ND	448	112	400	0.00	

Sample ID: T.T. 1 @ 32' (H225573-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4040**	16.0	11/29/2022	ND	448	112	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Etech Environmental & Safety Solutions, Inc.	**BILL TO**	
Project Manager:	Joel Lowry	**P.O. #:**	
Address:	2617 W Marland	**Company**	H.L. Brown
City:	Hobbs	**Attn:**	
State:	NM	**Address:**	
Zip:	88240	**City:**	
Phone #:	(575) 264-9884	**State:**	**Zip:**
Fax #:		**Phone #:**	
Project #:	16854	**Fax #:**	
Project Owner:	H.L. Brown		
Project Name:	Federal G 001		
Project Location:	Rural Roosevelt Co, NM		
Sampler Name:	Cynthia Reyna		

ANALYSIS REQUEST

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		Chloride	TPH (8015M)	BTEX (8021B)												
Lab I.D.	**Sample I.D.**	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME																
H275573																													
1	T.T.1 @ 20'	C	1			X					X		11	28	22		X												
2	T.T.1 @ 24'	↓	↓			↓					↓		↓				↓												
3	T.T.1 @ 28'																												
4	T.T.1 @ 32'																												

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

Relinquished By:	**Date:** 11/28/22	**Received By:**	
	Time: 1555		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Phone Result: ☐ Yes ☐ No **Add'l Phone #:**
Fax Result: ☐ Yes ☐ No **Add'l Fax #:**
REMARKS:

Please email results and copy of CoC to pm@etechenv.com.

Delivered By: (Circle One) 20.8°C-0.0 20.2 #113
Sampler - UPS - Bus - Other:

Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No

CHECKED BY: (Initials)

FORM-006
Revision 1.0

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

CARDINAL Laboratories

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

December 05, 2022

JOEL LOWRY

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: FEDERAL G 001

Enclosed are the results of analyses for samples received by the laboratory on 11/30/22 15:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	11/30/2022	Sampling Date:	11/30/2022
Reported:	12/05/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Tamara Oldaker
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: T.T. 1 @ 40' (H225611-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	12/02/2022	ND	432	108	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Etech Environmental & Safety Solutions, Inc.	**BILL TO**	
Project Manager:	Joel Lowry	**P.O. #:**	
Address:	2617 W Marland	**Company**	H.L. Brown
City:	Hobbs **State:** NM **Zip:** 88240	**Attn:**	
Phone #:	(575) 264-9884 **Fax #:**	**Address:**	
11854 **Project #:**	Federal GC #001 **Project Owner:** A.L. Brown	**City:**	
Project Name:	Federal G #001	**State:** **Zip:**	
Project Location:	Rural Roosevelt Co., NM	**Phone #:**	
Sampler Name:	Miguel Ruiz	**Fax #:**	

ANALYSIS REQUEST

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		Chloride	TPH (8015M)	BTEX (8021B)										
Lab I.D.	**Sample I.D.**	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	**DATE**	**TIME**													
H225611																										
1	T.T. 1 @ 40'	C	1			X					X		11/30/22		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:	**Date:** 11-30-22	**Received By:**	
	Time: 1525		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Delivered By: (Circle One) 4.8°C C.O.C
Sampler - UPS - Bus - Other: 4.2°C #113

Sample Condition		CHECKED BY: (Initials)
Cool	Intact	
☑ Yes ☐ No	☑ Yes ☐ No	

Phone Result: ☐ Yes ☐ No **Add'l Phone #:**
Fax Result: ☐ Yes ☐ No **Add'l Fax #:**
REMARKS:

Please email results and copy of CoC to pm@etechenv.com.

FORM-006
Revision 1.0

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

CARDINAL Laboratories

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

December 12, 2022

JOEL LOWRY

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: FEDERAL G 001

Enclosed are the results of analyses for samples received by the laboratory on 12/05/22 12:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	12/05/2022	Sampling Date:	12/05/2022
Reported:	12/12/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	** (See Notes)
Project Number:	16854	Sample Received By:	Tamara Oldaker
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: NH 1 @ 18' (H225689-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2022	ND	2.09	105	2.00	2.61	
Toluene*	<0.050	0.050	12/08/2022	ND	2.19	110	2.00	2.86	
Ethylbenzene*	<0.050	0.050	12/08/2022	ND	2.13	107	2.00	2.10	
Total Xylenes*	<0.150	0.150	12/08/2022	ND	6.50	108	6.00	2.48	
Total BTEX	<0.300	0.300	12/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *69.9-140*

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	12/08/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/06/2022	ND	178	89.1	200	10.3	
DRO >C10-C28*	<10.0	10.0	12/06/2022	ND	193	96.4	200	9.36	
EXT DRO >C28-C36	<10.0	10.0	12/06/2022	ND					

Surrogate: 1-Chlorooctane *64.1 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *69.8 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/05/2022	Sampling Date:	12/05/2022
Reported:	12/12/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	** (See Notes)
Project Number:	16854	Sample Received By:	Tamara Oldaker
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: EH 1 @ 18' (H225689-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2022	ND	2.09	105	2.00	2.61	
Toluene*	<0.050	0.050	12/08/2022	ND	2.19	110	2.00	2.86	
Ethylbenzene*	<0.050	0.050	12/08/2022	ND	2.13	107	2.00	2.10	
Total Xylenes*	<0.150	0.150	12/08/2022	ND	6.50	108	6.00	2.48	
Total BTEX	<0.300	0.300	12/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	12/08/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/06/2022	ND	178	89.1	200	10.3	
DRO >C10-C28*	<10.0	10.0	12/06/2022	ND	193	96.4	200	9.36	
EXT DRO >C28-C36	<10.0	10.0	12/06/2022	ND					

Surrogate: 1-Chlorooctane *72.0 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *77.3 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/05/2022	Sampling Date:	12/05/2022
Reported:	12/12/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	** (See Notes)
Project Number:	16854	Sample Received By:	Tamara Oldaker
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: SH 1 @ 18' (H225689-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2022	ND	2.09	105	2.00	2.61	
Toluene*	<0.050	0.050	12/08/2022	ND	2.19	110	2.00	2.86	
Ethylbenzene*	<0.050	0.050	12/08/2022	ND	2.13	107	2.00	2.10	
Total Xylenes*	<0.150	0.150	12/08/2022	ND	6.50	108	6.00	2.48	
Total BTEX	<0.300	0.300	12/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	12/08/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/07/2022	ND	194	96.9	200	4.87	
DRO >C10-C28*	<10.0	10.0	12/07/2022	ND	168	84.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	12/07/2022	ND					

Surrogate: 1-Chlorooctane *95.7 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *90.2 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/05/2022	Sampling Date:	12/05/2022
Reported:	12/12/2022	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	** (See Notes)
Project Number:	16854	Sample Received By:	Tamara Oldaker
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: WH 1 @ 18' (H225689-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/08/2022	ND	2.09	105	2.00	2.61	
Toluene*	<0.050	0.050	12/08/2022	ND	2.19	110	2.00	2.86	
Ethylbenzene*	<0.050	0.050	12/08/2022	ND	2.13	107	2.00	2.10	
Total Xylenes*	<0.150	0.150	12/08/2022	ND	6.50	108	6.00	2.48	
Total BTEX	<0.300	0.300	12/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *69.9-140*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	12/08/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/07/2022	ND	194	96.9	200	4.87	
DRO >C10-C28*	<10.0	10.0	12/07/2022	ND	168	84.1	200	10.6	
EXT DRO >C28-C36	<10.0	10.0	12/07/2022	ND					

Surrogate: 1-Chlorooctane *91.5 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *85.0 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Etech Environmental & Safety Solutions, Inc.
Project Manager:	Joel Lowry
Address:	2617 W Marland
City:	Hobbs **State:** NM **Zip:** 88240
Phone #:	(575) 264-9884 **Fax #:** ✓
Project #:	16854 **Project Owner:** H.L. Brown
Project Name:	Federal G #001
Project Location:	Rural Roosevelt co., NM
Sampler Name:	Miguel Ramirez

BILL TO

P.O. #:	
Company	H.L. Brown
Attn:	
Address:	
City:	
State:	**Zip:**
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chloride	TPH (8015M)	BTEX (8021B)
H225689																	
1	NW @ 1'	G	1			X					X		12/5/22		X	X	X
2	EW @ 1'																
3	SW @ 1'																
4	WW @ 1'																

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

Relinquished By:	**Date:** 12-5-22	**Received By:**	
	Time: 1250		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Phone Result: ☐ Yes ☐ No **Add'l Phone #:**
Fax Result: ☐ Yes ☐ No **Add'l Fax #:**
REMARKS:

Please email results and copy of CoC to pm@etechenv.com.

Delivered By: (Circle One) #113
Sampler - UPS - Bus - Other: 28.9 / 28.3c

Sample Condition
Cool: ☐ Yes ☐ No — Intact: ☑ Yes ☐ No

CHECKED BY: (Initials)

FORM-006
Revision 1.0

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

CARDINAL Laboratories

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

June 23, 2023

ZACH CONDER

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: FEDERAL G 001

Enclosed are the results of analyses for samples received by the laboratory on 06/22/23 15:23.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
ZACH CONDER
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	06/22/2023	Sampling Date:	06/21/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Tamara Oldaker
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: NW 1 (H233247-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/23/2023	ND	2.15	107	2.00	1.10	
Toluene*	<0.050	0.050	06/23/2023	ND	2.09	105	2.00	0.169	
Ethylbenzene*	<0.050	0.050	06/23/2023	ND	2.08	104	2.00	0.865	
Total Xylenes*	<0.150	0.150	06/23/2023	ND	6.32	105	6.00	0.914	
Total BTEX	<0.300	0.300	06/23/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	06/23/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/23/2023	ND	161	80.7	200	2.48	
DRO >C10-C28*	<10.0	10.0	06/23/2023	ND	162	80.8	200	0.436	
EXT DRO >C28-C36	<10.0	10.0	06/23/2023	ND					

Surrogate: 1-Chlorooctane *112 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *122 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
ZACH CONDER
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	06/22/2023	Sampling Date:	06/21/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Tamara Oldaker
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: EW 1 (H233247-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/23/2023	ND	2.15	107	2.00	1.10	
Toluene*	<0.050	0.050	06/23/2023	ND	2.09	105	2.00	0.169	
Ethylbenzene*	<0.050	0.050	06/23/2023	ND	2.08	104	2.00	0.865	
Total Xylenes*	<0.150	0.150	06/23/2023	ND	6.32	105	6.00	0.914	
Total BTEX	<0.300	0.300	06/23/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/23/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/23/2023	ND	161	80.7	200	2.48	
DRO >C10-C28*	<10.0	10.0	06/23/2023	ND	162	80.8	200	0.436	
EXT DRO >C28-C36	<10.0	10.0	06/23/2023	ND					

Surrogate: 1-Chlorooctane *103 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *112 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
ZACH CONDER
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	06/22/2023	Sampling Date:	06/21/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Tamara Oldaker
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: SW 1 (H233247-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/23/2023	ND	2.15	107	2.00	1.10	
Toluene*	<0.050	0.050	06/23/2023	ND	2.09	105	2.00	0.169	
Ethylbenzene*	<0.050	0.050	06/23/2023	ND	2.08	104	2.00	0.865	
Total Xylenes*	<0.150	0.150	06/23/2023	ND	6.32	105	6.00	0.914	
Total BTEX	<0.300	0.300	06/23/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/23/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/23/2023	ND	161	80.7	200	2.48	
DRO >C10-C28*	<10.0	10.0	06/23/2023	ND	162	80.8	200	0.436	
EXT DRO >C28-C36	<10.0	10.0	06/23/2023	ND					

Surrogate: 1-Chlorooctane *98.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *109 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
ZACH CONDER
2617 W MARLAND
HOBBS NM, 88240
Fax To:

Received:	06/22/2023	Sampling Date:	06/21/2023
Reported:	06/23/2023	Sampling Type:	Soil
Project Name:	FEDERAL G 001	Sampling Condition:	Cool & Intact
Project Number:	16854	Sample Received By:	Tamara Oldaker
Project Location:	HL BROWN-RURAL ROOSEVELT CO., NM		

Sample ID: WW 1 (H233247-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/23/2023	ND	2.15	107	2.00	1.10	
Toluene*	<0.050	0.050	06/23/2023	ND	2.09	105	2.00	0.169	
Ethylbenzene*	<0.050	0.050	06/23/2023	ND	2.08	104	2.00	0.865	
Total Xylenes*	<0.150	0.150	06/23/2023	ND	6.32	105	6.00	0.914	
Total BTEX	<0.300	0.300	06/23/2023	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	06/23/2023	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/23/2023	ND	161	80.7	200	2.48	
DRO >C10-C28*	<10.0	10.0	06/23/2023	ND	162	80.8	200	0.436	
EXT DRO >C28-C36	<10.0	10.0	06/23/2023	ND					

Surrogate: 1-Chlorooctane *87.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	H.L. Brown Operating, LLC	**BILL TO**	
Project Manager:	Zach Conder	**P.O. #:**	
Address:	3100 Plains Hwy	**Company:**	Etech Environmental
City:	Lovington **State:** NM **Zip:** 88260	**Attn:**	Zach Conder
Phone #:	575-396-2378 **Fax #:** 575-396-1429	**Address:**	P.O. Box 301
Project #:	16854 **Project Owner:** H.L. Brown Operating, LLC	**City:**	Lovington
Project Name:	Federal G #001	**State:** NM **Zip:** 88260	
Project Location:	UL/ D Sec 3 T8S - R37E	**Phone #:**	575-396-2378
Sampler Name:	Zach Conder	**Fax #:**	575-396-1429

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	**Sample I.D.**	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chloride	TPH	BTEX 8021										
H233247																										
1	NW1	C	1			X					X		6/21/23	12:00	X	X	X									
2	EW1	C	1			X					X		6/21/23	12:05	X	X	X									
3	SW1	C	1			X					X		6/21/23	12:10	X	X	X									
4	WW1	C	1			X					X		6/21/23	12:15	X	X	X									

Relinquished By:	**Date:** 6-22-23	**Received By:**	Phone Result: ☐ Yes ☐ No	Add'l Phone #:	
	Time: 1523		Fax Result: ☐ Yes ☐ No	Add'l Fax #:	
Relinquished By:	**Date:**	**Received By:**	**REMARKS:** Email results to zach@etechenv.com		
	Time:		RUSH Please		
Delivered By: (Circle One)	#413	**Sample Condition** Cool ☑ Yes ☐ No / Intact ☑ Yes ☐ No	**CHECKED BY:** (Initials)		
Sampler - UPS - Bus - Other:	-3.3°c / -3.9°c				

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

FORM-006 R 2.0

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

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

CONDITIONS

Operator: H L BROWN OPERATING, LLC P.O. Box 2237 Midland, TX 79702	OGRID: 213179
	Action Number: 258192
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	12/11/2023