

| | |
|----------------|----------------|
| Incident ID | nAPP2227233275 |
| District RP | |
| Facility ID | |
| Application ID | |

Site Assessment/Characterization

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? | <u>181.5</u> (ft bgs) |
| Did this release impact groundwater or surface water? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas not on an exploration, development, production, or storage site? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141

State of New Mexico
Oil Conservation Division

Page 4

| | |
|----------------|----------------|
| Incident ID | nAPP2227233275 |
| District RP | |
| Facility ID | |
| Application ID | |

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.

Printed Name: Risa CzarnikowTitle: Production TechSignature: Risa CzarnikowDate: 3-29-23email: rczarnikow@helmsoil.comTelephone: (432) 688-3727**OCD Only**Received by: Jocelyn HarimonDate: 03/29/2023

State of New Mexico
Oil Conservation Division

| | |
|----------------|----------------|
| Incident ID | nAPP2227233275 |
| District RP | |
| Facility ID | |
| Application ID | |

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☒ Detailed description of proposed remediation technique
- ☒ Scaled sitemap with GPS coordinates showing delineation points
- ☒ Estimated volume of material to be remediated
- ☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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.

Printed Name: Risa CzarnikowTitle: Production TechSignature: Risa CzarnikowDate: 3-29-23email: rczarnikow@helmsoil.comTelephone: (432) 688-3727**OCD Only**Received by: Jocelyn HarimonDate: 03/29/2023☐ Approved☒ Approved with Attached Conditions of Approval☐ Denied☐ Deferral ApprovedSignature: Jennifer NobuiDate: 05/04/2023

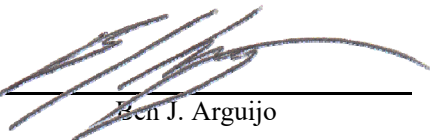
Remediation Summary & Variance Request

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

Midland • San Antonio • Lubbock • Hobbs • Lafayette

TABLE OF CONTENTS

| | <i>Section</i> |
|-------------------------------------------------------|----------------|
| PROJECT INFORMATION..... | 1.0 |
| SITE CHARACTERIZATION..... | 2.0 |
| CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE..... | 3.0 |
| REMEDIAATION ACTIVITIES SUMMARY..... | 4.0 |
| IN-SITU CHLORIDE MIGRATION MODELING..... | 5.0 |
| VARIANCE REQUEST & PROPOSED ACTIVITIES..... | 6.0 |
| RECLAMATION & RE-VEGETATION PLAN..... | 7.0 |
| LIMITATIONS..... | 8.0 |
| DISTRIBUTION..... | 9.0 |

FIGURES

Figure 1 - Topographic Map
Figure 2 - Site Characterization Map
Figure 3 - Site & Sample Location Map

TABLES

Table 1 - Concentrations of BTEX, TPH & Chloride in Soil

APPENDICES

Appendix A - Depth to Groundwater Information
Appendix B - Field Data
Appendix C - Laboratory Analytical Reports
Appendix D - Photographic Log
Appendix E - Multimedia Exposure Assessment Model (MULTIMED)

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 & Variance 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: <u>Federal G #001</u> | Site Type: <u>Well Head</u> |
| Date Release Discovered: <u>9/7/2022</u> | API # (if applicable): <u>30-041-20504</u> |

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

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name New Mexico Dept. of Game & Fish)

Nature and Volume of Release

| | | |
|-----------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Crude Oil | Volume Released (bbls) <u>5</u> | Volume Recovered (bbls) <u>0</u> |
| <input type="checkbox"/> Produced Water | Volume Released (bbls) | Volume Recovered (bbls) |
| | Is the concentration of total dissolved solids (TDS) 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:

Unknown historic release found during site inspection.

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 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? | 181.5' | | |
| Did the release impact groundwater or surface water? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> 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)? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> 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? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| Are the lateral extents of the release within 300 feet of a wetland? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| Are the lateral extents of the release overlying a subsurface mine? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| Are the lateral extents of the release within a 100-year floodplain? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| Did the release impact areas not on an exploration, development, production or storage site? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> 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*‡ |
|-------------------------------|--------------------------------------------------------|-----------------------------------|--------------------|------------------------|
| 181.5' | 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". 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, 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 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.

The dimensions of the excavated area/test pit are approximately 25 feet in length by 25 feet in width, and varying in depth from four (4) to 18 feet bgs. To date Etech has transported approximately 220 cubic yards of impacted soil to an NMOCD-permitted surface waste facility for disposal and imported approximately 200 cubic yards of locally sourced, non-impacted material to the site for use as backfill.

The extent of the excavated area/test pit 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 IN-SITU CHLORIDE MIGRATION MODELING

The majority of the test pit, which is inferred to be the area most heavily impacted by the release, has been excavated vertically to the extent practicable (approximately 18 feet bgs). H.L. Brown believes that deeper excavation poses environmental and safety risks that exceed the benefits of the removal of additional soil affected above the NMOCD Closure Criteria.

Etech utilized the Environmental Protection Agency's (EPA) Multimedia Exposure Assessment Model (MULTIMED) to determine if the chloride contamination remaining in-situ poses a threat to groundwater quality, as well as to simulate the efficacy of installing a geosynthetic liner to inhibit vertical migration of the contamination. The most appropriate and conservative parameter values possible for the site were used for the assessment model in regard to depth to groundwater, contaminant concentration (i.e., 11,900 mg/kg, the maximum chloride concentration encountered during delineation), soil porosity, etc. Additional parameter values were utilized that have been previously approved by the NMOCD as being representative of the general area and for simulating lined versus unlined excavations and/or oil and gas facilities. The model indicates the peak concentration of chloride in the underlying groundwater contributed by the contamination remaining in-situ would be approximately 104 mg/L in 1,200 years with a liner installed versus 1,385 mg/L in 349 years with no liner (see Appendix E).

Since the estimated peak concentration of chloride is below the standard of 250.0 mg/L specified in Section 20.6.2.3103 B.(1) NMAC, pursuant to Section 19.15.29.14.A(2) NMAC, the migration model effectively demonstrates that installation of a geosynthetic liner provides an "equal or better protection of fresh water, public health and the environment" as compared to a deeper excavation.

6.0 VARIANCE REQUEST & PROPOSED ACTIVITIES

Pursuant to Section 19.15.29.14 NMAC, H.L. Brown requests 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. Prior to installation of the liner, the test pit will be partially backfilled with locally sourced, non-impacted material to approximately six (6) feet bgs. The test pit sidewalls will be advanced horizontally to the areas characterized by test trenches NH 1, EH 1, SH 1, and WH 1. The newly excavated area will be advanced vertically to a total depth of approximately six (6) feet bgs. Representative five-point composite confirmation soil samples will be collected every 50 linear feet from the excavation sidewalls to be submitted for laboratory analysis. Upon receiving laboratory analytical results from confirmation soil samples, approximately six (6) inches of pad material will be installed on the floor of the excavated area both above and below the proposed liner in an effort to maintain its integrity during backfilling activities. The liner will be 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.

Immediately following installation of the liner and pad material, the remainder of the excavated area will be backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions and compacted/contoured to fit the needs of the Federal G #001 facility.

Following backfilling, a *Remediation Summary & Soil Closure Request* will be submitted to the NMOCD, documenting completed liner installation and site restoration activities.

7.0 RECLAMATION & RE-VEGETATION PLAN

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.

8.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Variance 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.

9.0 DISTRIBUTION

H.L. Brown Operating, LLC

*300 West Louisiana
Midland, TX 79702-2237*

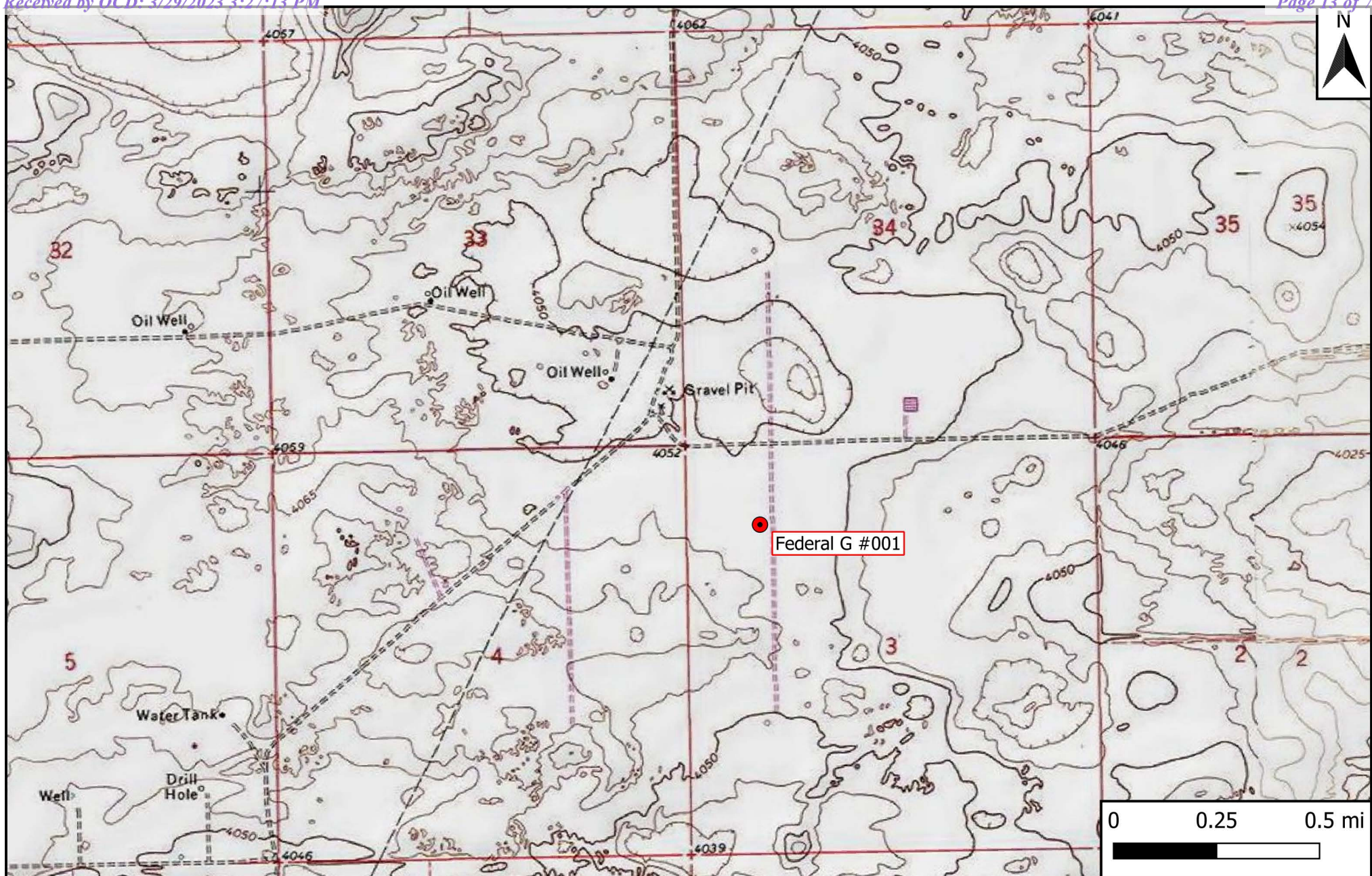
New Mexico Energy, Minerals and Natural Resources Department

*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



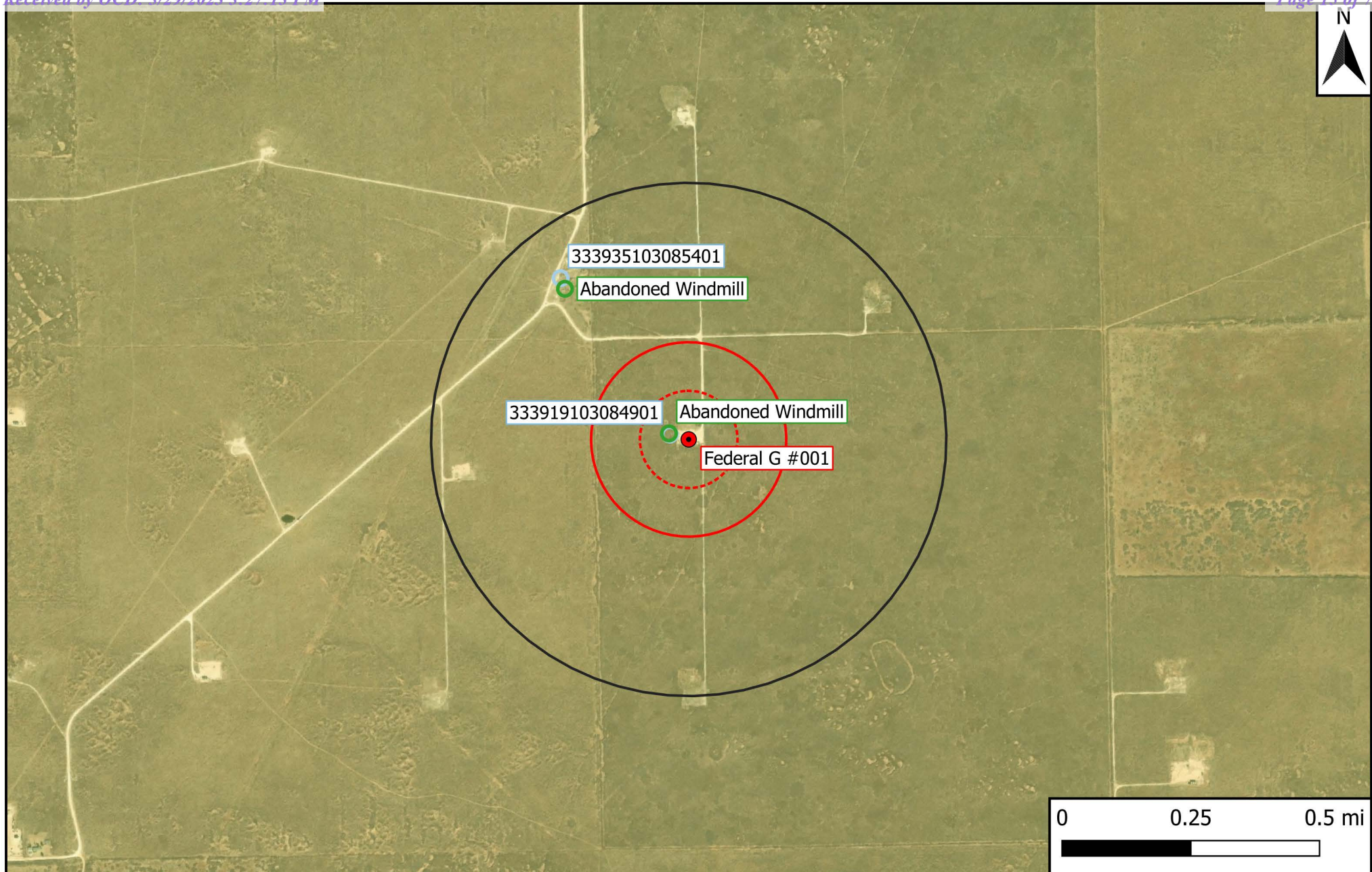
Drafted: bja

Checked: zc

Date: 1/9/23

Figure 2

Site Characterization Map



Legend

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

Figure 2

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



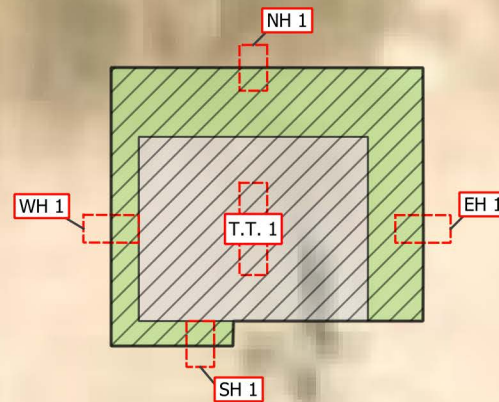
Drafted: bja

Checked: zc

Date: 3/9/23

Figure 3

Site & Sample Location Map



10 0 10 20 ft

Legend

- Proposed Excavation
- Historical Reserve Pit
- Proposed Liner
- Pipeline
- 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



Drafted: bja

Checked: zc

Date: 3/10/23

Table 1
Concentrations of BTEX, TPH & Chloride in Soil

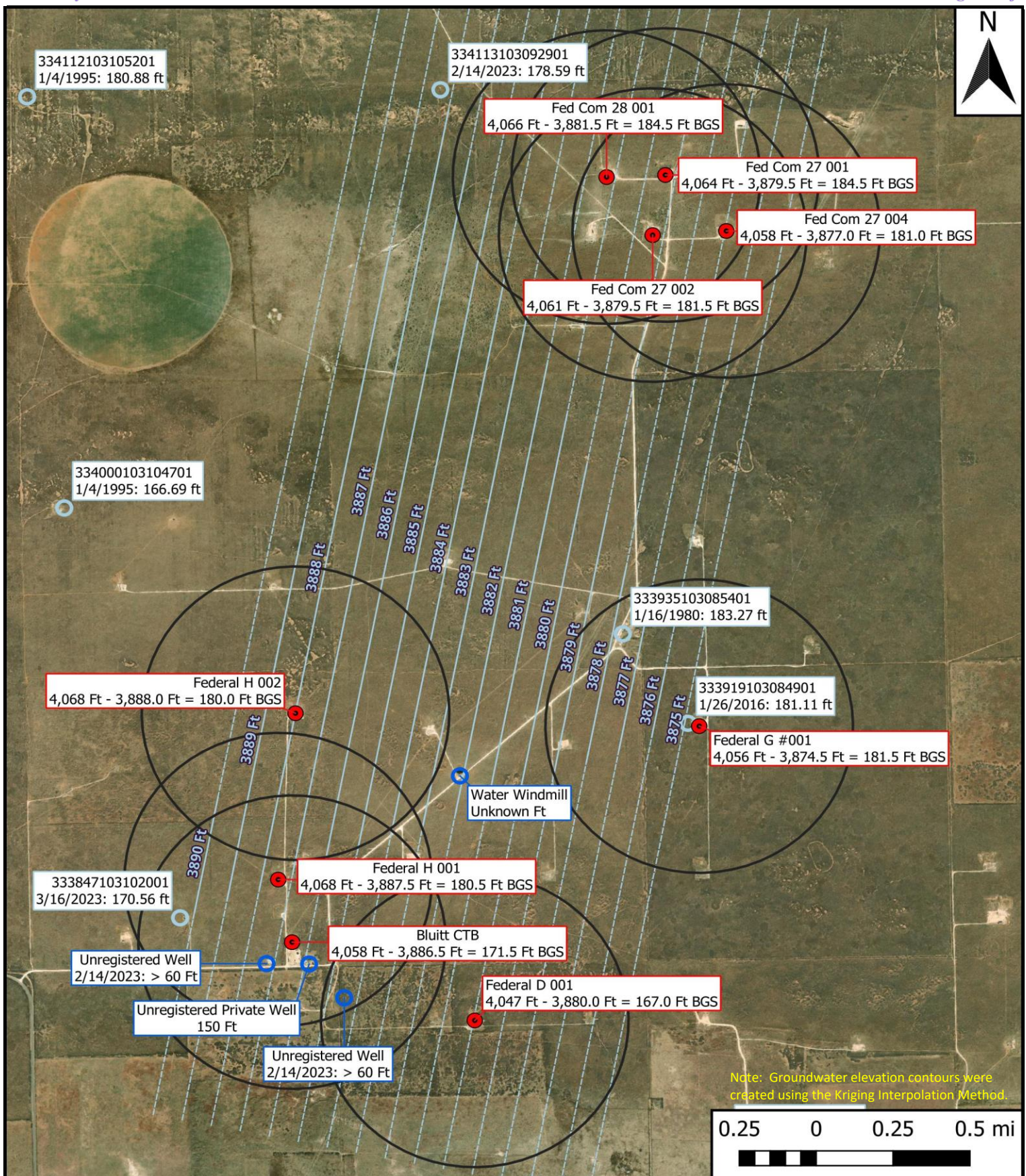
| Table 1 Concentrations of BTEX, TPH & Chloride in Soil H.L. Brown Operating, LLC Federal G #001 NMOCD Ref. #: nAPP2227233275 | | | | | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------|------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

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

Bold: NMOCD Closure Criteria exceedance.**Red:** NMOCD Reclamation Standard exceedance.

Appendix A

Depth to Groundwater Information



- Site Location
- Half Mile Radius
- Well - USGS
- Well - Other
- Groundwater Contours (Ft MSL)
- Extended Groundwater Contours

HL Brown Sites
 Inferred Depth to Groundwater Map
 H.L. Brown Operating, LLC
 Map GPS: 33.66350422, -103.15426221
 Roosevelt County, NM



Drafted: mag
 Checked: jwl
 Date: 3/17/23



Ground Water Sampling Log

Well ID: Unregistered Well

Date: 2/14/2023

Site Description/Construction Detail

Project: HL Browns Personnel: _____

Well Description/Location: Abandoned well SE of House Total Depth^a (ft bmp): N/A

Type of Well: Monitor Recovery Potable Irrigation Other

Casing Material: PVC (Steel) Other _____ Diameter: 2" 4" 6" Other 10" Screen (ft bmp): Stow Pipe

Condition of Seal: Good Poor Needs Repair Other Well Locked? Y N

Gauging Data

Static Water Level^b (ft bmp) 760 Time _____ Measure Point Description Top of casing .75 ft ass

Comments: Open @ 60 ft, did not go deeper, fear of equipment damage.

Well Purge Data

| Volume Factors ^c | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Dia (in.) | 2" | 3" | 4" | 5" | 6" |
| Gal/ft | 0.163 | 0.367 | 0.653 | 1.020 | 1.469 |

Well Volume ((a-b) x c) = gal

Purging Volume (3 x Well Vol) = _____ gal

Well Purging Method: submersible peristaltic bailer other _____ Depth pump set (ft bmp) _____

Water Quality Indicator Parameters

[illegible]

Recording Interval: Traditional volume purge - every ½ well volume; Low flow - every 3-5 min, drawdown should not exceed 0.33ft during purging.

Total Gallons Purged

Approximate Discharge Rate (gpm): _____

Sample Data

Sample Collection Method: submersible peristaltic bailer other_____ Sample Time _____

Comments *Project name for sample labels (if abbr): _____ Duplicate Collected? Y N

Stability • pH: ± 0.1

Criteria:

- SC: $\pm 5\%$, for SC $\leq 100 \mu\text{S/cm}$; $\pm 3\%$, for SC $> 100 \mu\text{S/cm}$
- DO: $\pm 10\%$ or 0.3 mg/L (whichever is greater)
- Temp: $\pm 0.2^\circ\text{C}$ (USGS for thermistor)

Sample tubing left in well? Y N
(circle yes or no)

If so, length (ft)?



Ground Water Sampling Log

Well ID: C1nregistered well

Date: 2/14/2023

Site Description/Construction Detail

Project: HL Browns Personnel: _____

Well Description/Location: Abandoned well Total Depth^a (ft bmp): N/A

Type of Well: Monitor Recovery Potable Irrigation Other Abandoned Livestock

Casing Material: PVC Steel Other _____ Diameter: 2" 4" 6" Other _____ Screen (ft bmp): Stove Pipe

Condition of Seal: Good Poor Needs Repair Other _____ Well Locked? Y N

Gauging Data

Static Water Level^b (ft bmp) 760 ft Time _____ Measure Point Description Top of Casine 1.5 ft ass

Comments: Open @ 60 ft, did not go deeper, fear of losing equipment / damage

Well Purge Data

| Volume Factors ^c | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Dia (in.) | 2" | 3" | 4" | 5" | 6" |
| Gal/ft | 0.163 | 0.367 | 0.653 | 1.020 | 1.469 |

Well Volume ((a-b) x c) = gal

Purging Volume (3 x Well Vol) = _____ gal

Well Purging Method: submersible peristaltic bailer other _____ Depth pump set (ft bmp) _____

Water Quality Indicator Parameters

[illegible]

Recording Interval: Traditional volume purge - every ½ well volume; Low flow - every 3-5 min, drawdown should not exceed 0.33ft during purging.

Total Gallons Purged

Approximate Discharge Rate (gpm): _____

Sample Data

Sample Collection Method: submersible peristaltic bailer other_____ Sample Time_____

Comments *Project name for sample labels (if abbr): _____ Duplicate Collected? Y N

Stability • pH: ± 0.1

Criteria:

- SC: $\pm 5\%$, for SC $\leq 100 \mu\text{S/cm}$; $\pm 3\%$, for SC $> 100 \mu\text{S/cm}$
- DO: $\pm 10\%$ or 0.3 mg/L (whichever is greater)
- Temp: $\pm 0.2^\circ\text{C}$ (USGS for thermistor)

Sample tubing left in well? Y N
(circle yes or no)

If so, **length** (ft)?



Ground Water Sampling Log

Well ID: 333647103102001

Date: 2/14/2016

Site Description/Construction Detail

Project: HL Browns Personnel: _____

Well Description/Location: Abandoned well Total Depth^a (ft bmp): NA

Type of Well: Monitor Recovery Potable Irrigation Other

Casing Material: PVC Steel Other _____ Diameter: 2" 4" 6" Other _____ Screen (ft bmp): Stone Pipe

Condition of Seal: Good Poor Needs Repair Other Well Locked? Y N

Gauging Data

Static Water Level^b (ft bmp) 760 Time Measure Point Description

Comments: Did not go deeper, fear of equipment damage

Well Purge Data

| Volume Factors ^c | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Dia (in.) | 2" | 3" | 4" | 5" | 6" |
| Gal/ft | 0.163 | 0.367 | 0.653 | 1.020 | 1.469 |

Well Volume ((a-b) x c) = _____ gal

Purging Volume (3 x Well Vol) = gal

Well Purging Method: submersible peristaltic bailer other _____ Depth pump set (ft bmp) _____

Water Quality Indicator Parameters

[illegible]

Recording Interval: Traditional volume purge - every ½ well volume; Low flow - every 3-5 min, drawdown should not exceed 0.33ft during purging.

Total Gallons Purged

Approximate Discharge Rate (gpm): _____

Sample Data

Sample Collection Method: submersible peristaltic bailer other_____ Sample Time_____

Comments *Project name for sample labels (if abbr): _____ Duplicate Collected? Y N

- | | |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stability | • pH: ± 0.1 |
| Criteria: | <ul style="list-style-type: none"> • SC: $\pm 5\%$, for SC $\leq 100 \mu\text{S/cm}$; $\pm 3\%$, for SC $> 100 \mu\text{S/cm}$ • DO: $\pm 10\%$ or 0.3 mg/L (whichever is greater) • Temp: $\pm 0.2^\circ\text{C}$ (USGS for thermistor) |

Sample tubing left in well? Y N
(circle yes or no)

If so, length (ft)? _____



Ground Water Sampling Log

Well ID: 334113103092901

Date: 2/14/2023

Site Description/Construction Detail

Project: HL Browns Personnel: _____

Well Description/Location: NW of Fed Corner Total Depth^a (ft bmp): N/A

Type of Well: Monitor ☒ Recovery ☐ Potable ☐ Irrigation ☐ Other Abandoned / Livestock

Casing Material: PVC Steel Other _____ Diameter: 2" 4" 6" Other _____ Screen (ft bmp): _____

| Condition of Seal: | Good | Poor | Needs Repair | Other | Well Locked? | Y | N |
|--------------------|------|------|--------------|-------|--------------|---|---|
| | | | | | | | |

Gauging Data

Static Water Level^b (ft bmp) 178.59 Time _____ Measure Point Description Top of Casine

Comments:

Well Purge Data

| Volume Factors ^c | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Dia (in.) | 2" | 3" | 4" | 5" | 6" |
| Gal/ft | 0.163 | 0.367 | 0.653 | 1.020 | 1.469 |

Well Volume ((a-b) x c) = _____ gal

Purging Volume (3 x Well Vol) = _____ gal

Well Purging Method: submersible peristaltic bailer other _____ Depth pump set (ft bmp) _____

Water Quality Indicator Parameters

[illegible]

Recording Interval: Traditional volume purge - every ½ well volume; Low flow - every 3-5 min, drawdown should not exceed 0.33ft during purging.

Total Gallons Purged _____

Approximate Discharge Rate (gpm): _____

Sample Data

Sample Collection Method: submersible peristaltic bailer other_____ Sample Time_____

Comments *Project name for sample labels (if abbr): _____ Duplicate Collected? Y N

- | | |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stability | • pH: ± 0.1 |
| Criteria: | <ul style="list-style-type: none"> • SC: $\pm 5\%$, for SC $\leq 100 \mu\text{S/cm}$; $\pm 3\%$, for SC $> 100 \mu\text{S/cm}$ • DO: $\pm 10\%$ or 0.3 mg/L (whichever is greater) • Temp: $\pm 0.2^\circ\text{C}$ (USGS for thermistor) |

Sample tubing left in well? Y N
(circle yes or no)

If so, **length** (ft)?



Ground Water Sampling Log

Well ID: 333847103102001

Date: 3/16/2023

Site Description/Construction Detail

Project: HL Browns Personnel: _____

Well Description/Location: Abandoned Well Total Depth^a (ft bmp): N/A

Type of Well: Monitor ☐ Recovery ☐ Potable ☐ Irrigation ☐ Other ☒ Abandoned Well, Livestock

Casing Material: PVC Steel Other _____ Diameter: 2" 4" 6" Other _____ Screen (ft bmp): Stone Pipe

Condition of Seal: Good Poor Needs Repair Other N/A Well Locked? Y (N)

Gauging Data

Static Water Level^b (ft bmp) 176.56 Time _____ Measure Point Description Top of Casing ~ 2 ft sgs

Comments:

Well Purge Data

| Volume Factors ^c | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Dia (in.) | 2" | 3" | 4" | 5" | 6" |
| Gal/ft | 0.163 | 0.367 | 0.653 | 1.020 | 1.469 |

Well Volume ((a-b) x c) = gal

Purging Volume (3 x Well Vol) = _____ gal

Well Purging Method: ☒ submersible ☐ peristaltic ☐ bailer ☐ other _____ Depth pump set (ft bmp) _____

Water Quality Indicator Parameters

[illegible]

Recording Interval: Traditional volume purge - every ½ well volume; Low flow - every 3-5 min, drawdown should not exceed 0.33ft during purging.

Total Gallons Purged _____

Approximate Discharge Rate (gpm): _____

Sample Data

Sample Collection Method: submersible peristaltic bailer other _____ Sample Time _____

Comments *Project name for sample labels (if abbr): _____ Duplicate Collected? Y N

Stability • pH: ± 0.1

Criteria:

- SC: $\pm 5\%$, for SC $\leq 100 \mu\text{S/cm}$; $\pm 3\%$, for SC $> 100 \mu\text{S/cm}$
- DO: $\pm 10\%$ or 0.3 mg/L (whichever is greater)
- Temp: $\pm 0.2^\circ\text{C}$ (USGS for thermistor)

Sample tubing left in well? Y N
(circle yes or no)

If so, length (ft)?



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.

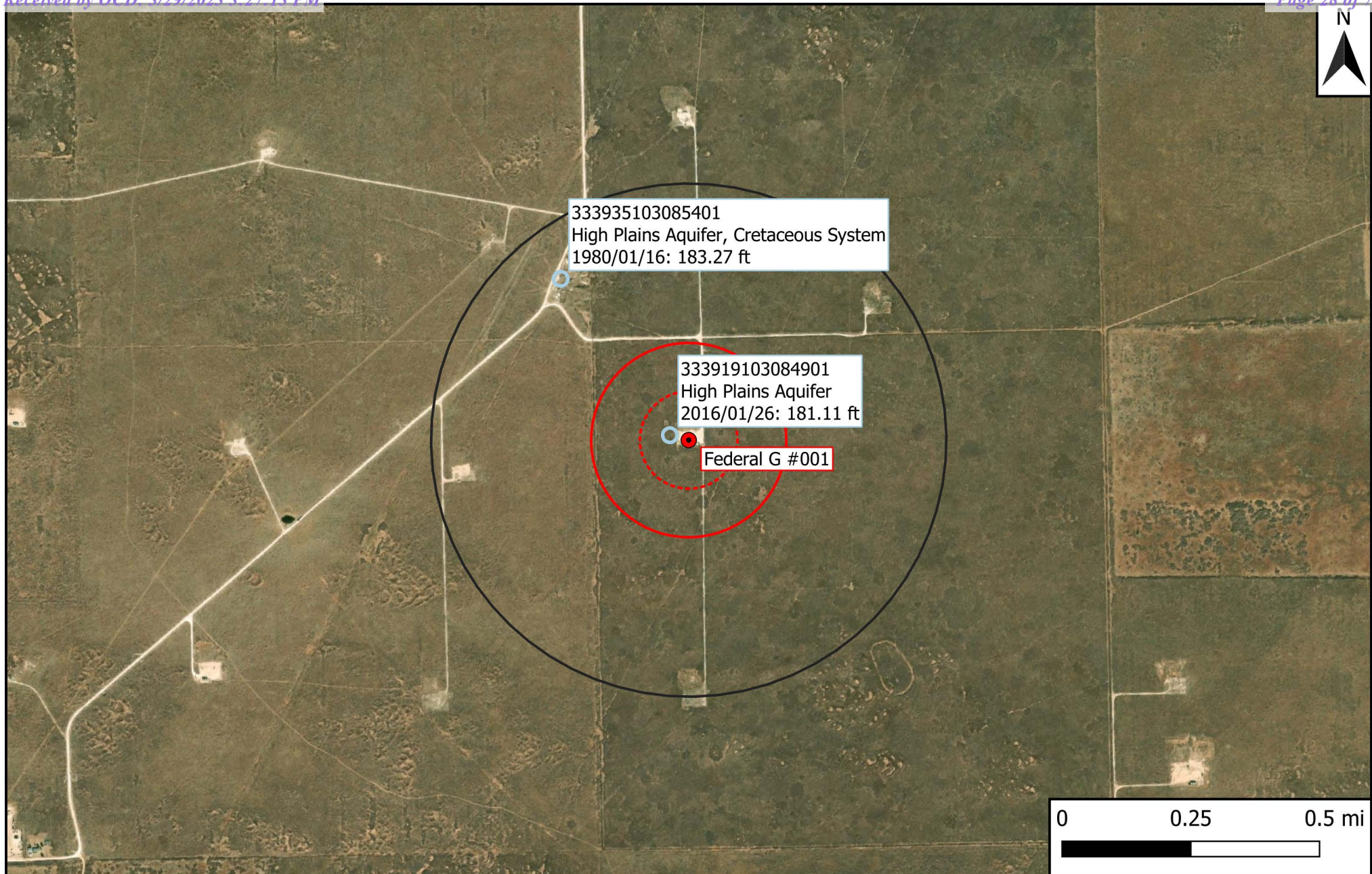
UTMNAD83 Radius Search (in meters):

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

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.

10/13/22 9:20 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



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



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. |

[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 21:13:29 EST

0.32 0.24 nadww01

Appendix B

Field Data



Sample Log

Date: 10/26/22

Project: Federal G 001

Project Number: 16854

Latitude: 33.654722

Longitude: ^{600/100} -103.146262

[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

Appendix C

Laboratory Analytical Reports



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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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)

| 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 | 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 BTX | <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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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)

| 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 | 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 BTX | <0.300 | 0.300 | 11/12/2022 | ND | | | | | |

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

| Chloride, SM4500CI-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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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)

| 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 | 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 BTX | <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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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)

| 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 | 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 BTX | <0.300 | 0.300 | 11/12/2022 | ND | | | | | |

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

| Chloride, SM4500CI-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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

A handwritten signature in black ink, appearing to read "Celey D. Keene", written over a horizontal line.

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 | | | | | | | | | | | | ANALYSIS REQUEST | | | | | | | | | | | | | |
| Project Manager: Joe L. Lowry | | | | P.O. #: | | | | <div style="display: flex; flex-direction: column; align-items: center;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div> | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | MATRIX | | | | PRESERV | | | | SAMPLING | | | | | | | | | | | | | |
| 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 | |
| H225314 | | | | G | | 1 | | | | | | X | | | | | | | | X | | 11/9/22 | | | | | | | |
| 1 | | T.T. 104' | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | T.T. 106' | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | T.T. 108' | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | T.T. 1010' | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | T.T. 1012' | | 1 | | 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: 11/10/22 | | Received By: | | Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | Add'l Phone #: | |
| Time: 1:59 | | Time: 1:59 | | | | Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | Add'l Fax #: | |
| Relinquished By: | | Date: | | Received By: | | REMARKS: email results pm@etechenv.com Standard | | | |
| | | Time: | | | | | | | |
| Delivered By: (Circle One) | | -4.12 C.O. 112 | | Sample Condition | | | | | |
| Sampler - UPS - Bus - Other: | | -4.72 #113 | | Cool Intact | | | | | |
| | | | | Yes Yes | | | | | |
| | | | | No No | | | | | |
| | | | | CHECKED BY: (initials) | | | | | |
| | | | | SK | | | | | |

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



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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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, SM4500CI-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, SM4500CI-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, SM4500CI-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, SM4500CI-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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

| | |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager

**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

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 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: | 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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

| | |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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]

FORM-006
Revision 1.0

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



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 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: | 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)

| BTX 8021B | | mg/kg | | Analyzed By: JH | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/08/2022 | 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 BTX | <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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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)

| BTX 8021B | | mg/kg | | Analyzed By: JH | | | | | |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
| Benzene* | <0.050 | 0.050 | 12/08/2022 | 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 BTX | <0.300 | 0.300 | 12/08/2022 | ND | | | | | |

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

| Chloride, SM4500CI-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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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, SM4500CI-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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

| | |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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]

Appendix D

Photographic Log

Photographic Log



Photographic Log

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

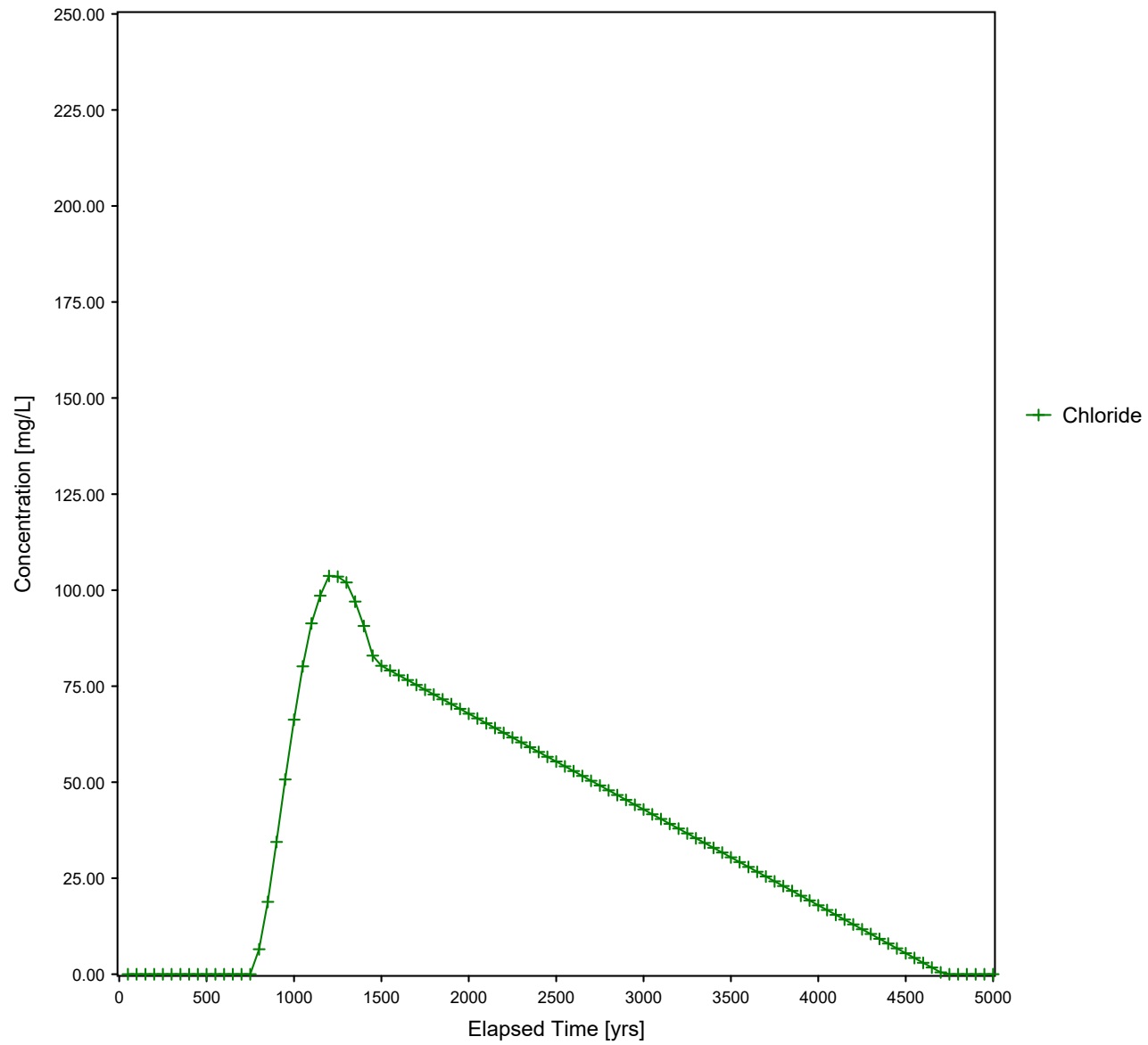
| | |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Photo Number: 4 |  |
| Photo Direction: South | |
| Photo Description: View of the advancement of test trench T.T. 1. | |

Appendix E

Multimedia Exposure Assessment Model (MULTIMED)

Chloride Concentration At The Receptor Well (with Liner)

H.L. Brown Operating, LLC
Federal G #001



Released to Imaging 3/4/2023 12:30:41 PM

U. S. ENVIRONMENTAL PROTECTION AGENCY
EXPOSURE ASSESSMENT
MULTIMEDIA MODEL

MULTIMED (Version 1.50, 2005)

Switched to Stehfest algorithm to avoid numerical problems
with Convolution algorithm. Problems were caused by
high source decay rate. Everything ok now, execution continuing...

1 Run options

1 H.L. Brown Operating, LLC

Federal G #001
Chemical simulated is Chloride

Option Chosen Saturated and unsaturated zone models
Run was DETERMIN
Infiltration Specified By User: 7.620E-03 m/yr
Run was transient
Well Times: Find Maximum Concentration
Reject runs if Y coordinate outside plume
Reject runs if Z coordinate outside plume
Gaussian source used in saturated zone model

1 UNSATURATED ZONE FLOW MODEL PARAMETERS
1 (input parameter description and value)
NP - Total number of nodal points 240
NMAT - Number of different porous materials 1
KPROP - Van Genuchten or Brooks and Corey 1
IMSHGN - Spatial discretization option 1
NVFLAYR - Number of layers in flow model 1

OPTIONS CHOSEN

Van Genuchten functional coefficients
User defined coordinate system

1 Layer information

| LAYER NO. | LAYER THICKNESS | MATERIAL PROPERTY |
|-----------|-----------------|-------------------|
| 1 | 42.98 | 1 |

DATA FOR MATERIAL 1

VADOSE ZONE MATERIAL VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|----------------------------------|-------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Saturated hydraulic conductivity | cm/hr | CONSTANT | 3.60 | -999. | -999. | -999. |
| Unsaturated zone porosity | -- | CONSTANT | 0.250 | -999. | -999. | -999. |
| Air entry pressure head | m | CONSTANT | 0.700 | -999. | -999. | -999. |
| Depth of the unsaturated zone | m | CONSTANT | 43.0 | 0.000 | 0.000 | 0.000 |

DATA FOR MATERIAL 1

VADOSE ZONE FUNCTION VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|------------------------------|-------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Residual water content | -- | CONSTANT | 0.116 | -999. | -999. | -999. |
| Brook and Corey exponent, EN | -- | CONSTANT | -999. | -999. | -999. | -999. |
| ALFA coefficient | 1/cm | CONSTANT | 0.500E-02 | -999. | -999. | -999. |
| Van Genuchten exponent, ENN | -- | CONSTANT | 1.09 | -999. | -999. | -999. |

UNSATURATED ZONE TRANSPORT MODEL PARAMETERS

| | | |
|--------|--------------------------------------------|--------|
| NLAY | - Number of different layers used | 1 |
| NTSTPS | - Number of time values concentration calc | 40 |
| DUMMY | - Not presently used | 1 |
| ISOL | - Type of scheme used in unsaturated zone | 1 |
| N | - Stehfest terms or number of increments | 18 |
| NTEL | - Points in Lagrangian interpolation | 3 |
| NGPTS | - Number of Gauss points | 104 |
| NIT | - Convolution integral segments | 2 |
| IBOUND | - Type of boundary condition | 3 |
| ITSGEN | - Time values generated or input | 1 |
| TMAX | - Max simulation time | -- 0.0 |
| WTFUN | - Weighting factor | -- 1.2 |

OPTIONS CHOSEN

Stehfest numerical inversion algorithm
Exponentially decaying continuous source
Computer generated times for computing concentrations

DATA FOR LAYER 1

VADOSE TRANSPORT VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|------------------------------------|-------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Thickness of layer | m | CONSTANT | 43.0 | -999. | -999. | -999. |
| Longitudinal dispersivity of layer | m | DERIVED | -999. | -999. | -999. | -999. |
| Percent organic matter | -- | CONSTANT | 0.000 | -999. | -999. | -999. |
| Bulk density of soil for layer | g/cc | CONSTANT | 1.99 | -999. | -999. | -999. |
| Biological decay coefficient | 1/yr | CONSTANT | 0.000 | -999. | -999. | -999. |

CHEMICAL SPECIFIC VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|-----------------------------------------|-----------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Solid phase decay coefficient | 1/yr | DERIVED | -999. | -999. | -999. | -999. |
| Dissolved phase decay coefficient | 1/yr | DERIVED | -999. | -999. | -999. | -999. |
| Overall chemical decay coefficient | 1/yr | DERIVED | -999. | -999. | -999. | -999. |
| Acid catalyzed hydrolysis rate | 1/M-yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Neutral hydrolysis rate constant | 1/yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Base catalyzed hydrolysis rate | 1/M-yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Reference temperature | C | CONSTANT | 25.0 | -999. | -999. | -999. |
| Normalized distribution coefficient | ml/g | CONSTANT | 0.000 | -999. | -999. | -999. |
| Distribution coefficient | -- | DERIVED | -999. | -999. | -999. | -999. |
| Biodegradation coefficient (sat. zone) | 1/yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Air diffusion coefficient | cm2/s | CONSTANT | -999. | -999. | -999. | -999. |
| Reference temperature for air diffusion | C | CONSTANT | -999. | -999. | -999. | -999. |
| Molecular weight | g/M | CONSTANT | -999. | -999. | -999. | -999. |
| Mole fraction of solute | -- | CONSTANT | -999. | -999. | -999. | -999. |
| Vapor pressure of solute | mm Hg | CONSTANT | -999. | -999. | -999. | -999. |
| Henry`s law constant | atm-m^3/M | CONSTANT | -999. | -999. | -999. | -999. |
| Overall 1st order decay sat. zone | 1/yr | DERIVED | 0.000 | 0.000 | 0.000 | 1.00 |
| Not currently used | | CONSTANT | 0.000 | 0.000 | 0.000 | 0.000 |
| Not currently used | | CONSTANT | 0.000 | 0.000 | 0.000 | 0.000 |

SOURCE SPECIFIC VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|-----------------------------------|-------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Infiltration rate | m/yr | CONSTANT | 0.762E-02 | -999. | -999. | -999. |
| Area of waste disposal unit | m^2 | CONSTANT | 90.0 | -999. | -999. | -999. |
| Duration of pulse | yr | DERIVED | 0.100E-08 | -999. | -999. | -999. |
| Spread of contaminant source | m | DERIVED | -999. | -999. | -999. | -999. |
| Recharge rate | m/yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Source decay constant | 1/yr | CONSTANT | 0.250E-01 | 0.000 | 0.000 | 0.000 |
| Initial concentration at landfill | mg/l | CONSTANT | 0.119E+05 | -999. | -999. | -999. |

| | | | | | | |
|--------------------------|---|---------|-------|-------|-------|-------|
| Length scale of facility | m | DERIVED | -999. | -999. | -999. | -999. |
| Width scale of facility | m | DERIVED | -999. | -999. | -999. | -999. |
| Near field dilution | | DERIVED | 1.00 | 0.000 | 0.000 | 1.00 |

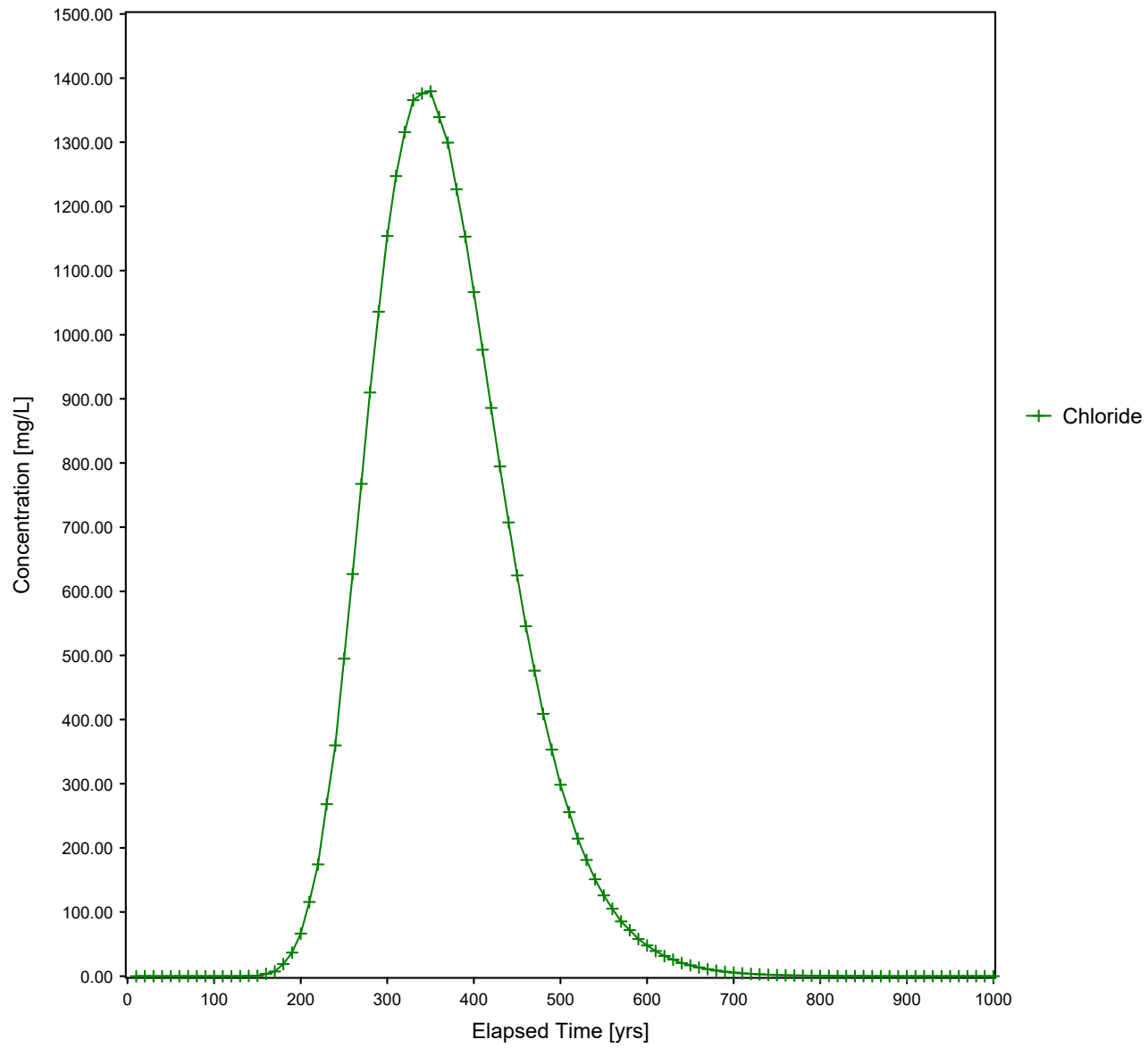
AQUIFER SPECIFIC VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|--------------------------------------|--------|---------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Particle diameter | cm | CONSTANT | -999. | -999. | -999. | -999. |
| Aquifer porosity | -- | CONSTANT | 0.300 | -999. | -999. | -999. |
| Bulk density | g/cc | CONSTANT | 1.86 | -999. | -999. | -999. |
| Aquifer thickness | m | CONSTANT | 6.10 | -999. | -999. | -999. |
| Source thickness (mixing zone depth) | m | DERIVED | -999. | -999. | -999. | -999. |
| Conductivity (hydraulic) | m/yr | CONSTANT | 315. | -999. | -999. | -999. |
| Gradient (hydraulic) | | CONSTANT | 0.300E-02 | -999. | -999. | -999. |
| Groundwater seepage velocity | m/yr | DERIVED | -999. | -999. | -999. | -999. |
| Retardation coefficient | -- | DERIVED | -999. | -999. | -999. | -999. |
| Longitudinal dispersivity | m | FUNCTION OF X | -999. | -999. | -999. | -999. |
| Transverse dispersivity | m | FUNCTION OF X | -999. | -999. | -999. | -999. |
| Vertical dispersivity | m | FUNCTION OF X | -999. | -999. | -999. | -999. |
| Temperature of aquifer | C | CONSTANT | 20.0 | -999. | -999. | -999. |
| pH | -- | CONSTANT | 7.00 | -999. | -999. | -999. |
| Organic carbon content (fraction) | | CONSTANT | 0.000 | -999. | -999. | -999. |
| Well distance from site | m | CONSTANT | 1.00 | -999. | -999. | -999. |
| Angle off center | degree | CONSTANT | 0.000 | -999. | -999. | -999. |
| Well vertical distance | m | CONSTANT | 0.000 | -999. | -999. | -999. |

MAXIMUM WELL CONCENTRATION IS 104.0 AT 1200 YEARS

Chloride Concentration At The Receptor Well (No Liner)

H.L. Brown Operating, LLC
Federal G #001



Released to Imaging: 3/4/2023 12:30:41 PM

U. S. ENVIRONMENTAL PROTECTION AGENCY
EXPOSURE ASSESSMENT
MULTIMEDIA MODEL
MULTIMED (Version 1.50, 2005)

Run options

H.L. Brown Operating, LLC
Federal G #001
Chemical simulated is Chloride

Option Chosen Saturated and unsaturated zone models
Run was DETERMIN
Infiltration Specified By User: 3.048E-02 m/yr
Run was transient
Well Times: Find Maximum Concentration
Reject runs if Y coordinate outside plume
Reject runs if Z coordinate outside plume
Gaussian source used in saturated zone model

UNSATURATED ZONE FLOW MODEL PARAMETERS
(input parameter description and value)
NP - Total number of nodal points 240
NMAT - Number of different porous materials 1
KPROP - Van Genuchten or Brooks and Corey 1
IMSHGN - Spatial discretization option 1
NVFLAYR - Number of layers in flow model 1

OPTIONS CHOSEN

Van Genuchten functional coefficients
User defined coordinate system

Layer information

| LAYER NO. | LAYER THICKNESS | MATERIAL PROPERTY |
|-----------|-----------------|-------------------|
| 1 | 42.98 | 1 |

VADOSE ZONE MATERIAL VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|----------------------------------|-------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Saturated hydraulic conductivity | cm/hr | CONSTANT | 3.60 | -999. | -999. | -999. |
| Unsaturated zone porosity | -- | CONSTANT | 0.250 | -999. | -999. | -999. |
| Air entry pressure head | m | CONSTANT | 0.700 | -999. | -999. | -999. |
| Depth of the unsaturated zone | m | CONSTANT | 43.0 | 0.000 | 0.000 | 0.000 |

DATA FOR MATERIAL 1

VADOSE ZONE FUNCTION VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|------------------------------|-------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Residual water content | -- | CONSTANT | 0.116 | -999. | -999. | -999. |
| Brook and Corey exponent, EN | -- | CONSTANT | -999. | -999. | -999. | -999. |
| ALFA coefficient | 1/cm | CONSTANT | 0.500E-02 | -999. | -999. | -999. |
| Van Genuchten exponent, ENN | -- | CONSTANT | 1.09 | -999. | -999. | -999. |

1

UNSATURATED ZONE TRANSPORT MODEL PARAMETERS

| | | |
|--------|--------------------------------------------|--------|
| NLAY | - Number of different layers used | 1 |
| NTSTPS | - Number of time values concentration calc | 40 |
| DUMMY | - Not presently used | 1 |
| ISOL | - Type of scheme used in unsaturated zone | 2 |
| N | - Stehfest terms or number of increments | 18 |
| NTEL | - Points in Lagrangian interpolation | 3 |
| NGPTS | - Number of Gauss points | 104 |
| NIT | - Convolution integral segments | 2 |
| IBOUND | - Type of boundary condition | 3 |
| ITSGEN | - Time values generated or input | 1 |
| TMAX | - Max simulation time | -- 0.0 |
| WTFUN | - Weighting factor | -- 1.2 |

OPTIONS CHOSEN

Convolution integral approach
Exponentially decaying continuous source
Computer generated times for computing concentrations

1

DATA FOR LAYER 1

VADOSE TRANSPORT VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|------------------------------------|-------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Thickness of layer | m | CONSTANT | 43.0 | -999. | -999. | -999. |
| Longitudinal dispersivity of layer | m | DERIVED | -999. | -999. | -999. | -999. |
| Percent organic matter | -- | CONSTANT | 0.000 | -999. | -999. | -999. |
| Bulk density of soil for layer | g/cc | CONSTANT | 1.99 | -999. | -999. | -999. |
| Biological decay coefficient | 1/yr | CONSTANT | 0.000 | -999. | -999. | -999. |

CHEMICAL SPECIFIC VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|-----------------------------------------|-----------------------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Solid phase decay coefficient | 1/yr | DERIVED | -999. | -999. | -999. | -999. |
| Dissolved phase decay coefficient | 1/yr | DERIVED | -999. | -999. | -999. | -999. |
| Overall chemical decay coefficient | 1/yr | DERIVED | -999. | -999. | -999. | -999. |
| Acid catalyzed hydrolysis rate | 1/M-yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Neutral hydrolysis rate constant | 1/yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Base catalyzed hydrolysis rate | 1/M-yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Reference temperature | C | CONSTANT | 25.0 | -999. | -999. | -999. |
| Normalized distribution coefficient | ml/g | CONSTANT | 0.000 | -999. | -999. | -999. |
| Distribution coefficient | -- | DERIVED | -999. | -999. | -999. | -999. |
| Biodegradation coefficient (sat. zone) | 1/yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Air diffusion coefficient | cm ² /s | CONSTANT | -999. | -999. | -999. | -999. |
| Reference temperature for air diffusion | C | CONSTANT | -999. | -999. | -999. | -999. |
| Molecular weight | g/M | CONSTANT | -999. | -999. | -999. | -999. |
| Mole fraction of solute | -- | CONSTANT | -999. | -999. | -999. | -999. |
| Vapor pressure of solute | mm Hg | CONSTANT | -999. | -999. | -999. | -999. |
| Henry's law constant | atm-m ³ /M | CONSTANT | -999. | -999. | -999. | -999. |
| Overall 1st order decay sat. zone | 1/yr | DERIVED | 0.000 | 0.000 | 0.000 | 1.00 |
| Not currently used | | CONSTANT | 0.000 | 0.000 | 0.000 | 0.000 |
| Not currently used | | CONSTANT | 0.000 | 0.000 | 0.000 | 0.000 |

SOURCE SPECIFIC VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|-----------------------------------|----------------|--------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Infiltration rate | m/yr | CONSTANT | 0.305E-01 | -999. | -999. | -999. |
| Area of waste disposal unit | m ² | CONSTANT | 90.0 | -999. | -999. | -999. |
| Duration of pulse | yr | DERIVED | 0.100E-08 | -999. | -999. | -999. |
| Spread of contaminant source | m | DERIVED | -999. | -999. | -999. | -999. |
| Recharge rate | m/yr | CONSTANT | 0.000 | -999. | -999. | -999. |
| Source decay constant | 1/yr | CONSTANT | 0.250E-01 | 0.000 | 0.000 | 0.000 |
| Initial concentration at landfill | mg/l | CONSTANT | 0.119E+05 | -999. | -999. | -999. |
| Length scale of facility | m | DERIVED | -999. | -999. | -999. | -999. |
| Width scale of facility | m | DERIVED | -999. | -999. | -999. | -999. |
| Near field dilution | | DERIVED | 1.00 | 0.000 | 0.000 | 1.00 |

AQUIFER SPECIFIC VARIABLES

| VARIABLE NAME | UNITS | DISTRIBUTION | PARAMETERS | | LIMITS | |
|--------------------------------------|--------|---------------|------------|---------|--------|-------|
| | | | MEAN | STD DEV | MIN | MAX |
| Particle diameter | cm | CONSTANT | -999. | -999. | -999. | -999. |
| Aquifer porosity | -- | CONSTANT | 0.300 | -999. | -999. | -999. |
| Bulk density | g/cc | CONSTANT | 1.86 | -999. | -999. | -999. |
| Aquifer thickness | m | CONSTANT | 6.10 | -999. | -999. | -999. |
| Source thickness (mixing zone depth) | m | DERIVED | -999. | -999. | -999. | -999. |
| Conductivity (hydraulic) | m/yr | CONSTANT | 315. | -999. | -999. | -999. |
| Gradient (hydraulic) | | CONSTANT | 0.300E-02 | -999. | -999. | -999. |
| Groundwater seepage velocity | m/yr | DERIVED | -999. | -999. | -999. | -999. |
| Retardation coefficient | -- | DERIVED | -999. | -999. | -999. | -999. |
| Longitudinal dispersivity | m | FUNCTION OF X | -999. | -999. | -999. | -999. |
| Transverse dispersivity | m | FUNCTION OF X | -999. | -999. | -999. | -999. |
| Vertical dispersivity | m | FUNCTION OF X | -999. | -999. | -999. | -999. |
| Temperature of aquifer | C | CONSTANT | 20.0 | -999. | -999. | -999. |
| pH | -- | CONSTANT | 7.00 | -999. | -999. | -999. |
| Organic carbon content (fraction) | | CONSTANT | 0.000 | -999. | -999. | -999. |
| Well distance from site | m | CONSTANT | 1.00 | -999. | -999. | -999. |
| Angle off center | degree | CONSTANT | 0.000 | -999. | -999. | -999. |
| Well vertical distance | m | CONSTANT | 0.000 | -999. | -999. | -999. |

MAXIMUM WELL CONCENTRATION IS 1385. AT 349 YEARS

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

Action 202027

CONDITIONS

| | |
|-----------------------------------------------------------------------------|-----------------------------------------------------------|
| Operator: H L BROWN OPERATING, LLC P.O. Box 2237 Midland, TX 79702 | OGRID: 213179 |
| | Action Number: 202027 |
| | Action Type: [C-141] Release Corrective Action (C-141) |

CONDITIONS

| Created By | Condition | Condition Date |
|------------|----------------------------------------------------------------------------------------|----------------|
| jnobui | Remediation Plan Approved with Conditions. Variance approved to install a liner at 6'. | 5/4/2023 |