

# Remediation Summary & Variance Request


## Mewbourne Oil Company Dagger Draw Trunk Line

Eddy County, New Mexico  
Unit Letter "O", Section 10, Township 20 South, Range 25 East  
Latitude 32.580784 North, Longitude 104.470355 West  
**NMOCD Reference No. nAPP2409454303**

Prepared By:

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## 1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Mewbourne Oil Company, has prepared this *Remediation Summary & Variance Request* for the release site known as the Dagger Draw Trunk Line. Details of the release are summarized below:

### Location of Release Source

Latitude: 32.580784 Longitude: -104.470355

Provided GPS are in WGS84 format.

Site Name: <u>Dagger Draw Trunk Line</u>	Site Type: <u>Pipeline</u>
Date Release Discovered: <u>3/22/2024</u>	API # (if applicable): <u>N/A</u>

Unit Letter	Section	Township	Range	County
"O"	10	20S	25E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name Willard Laurence David, et al./Henry Terpening )

### Nature and Volume of Release

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) <u>113</u>	Volume Recovered (bbls) <u>85</u>
	Is the concentration of dissolved chloride in the produced water > 10,000 mg/L?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input 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:

A check valve in the 4" poly SWD line developed a hole.

### Initial Response

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

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

## 2.0 SITE CHARACTERIZATION

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (bgs)?	Between 51 and 75 (ft.)
What method was used to determine the depth to groundwater?	Direct Measurement
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
What is the minimum distance between the closest lateral extents of the release and the following surface areas?	
A continuously flowing watercourse or any other significant watercourse?	Zero feet, overlying, or within area
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution or church?	> 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	Between 1,000 (ft.) and ½ (mi.)
Any other fresh water well or spring?	Between 1,000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field?	> 5 (mi.)
A wetland?	Greater than 5 (mi.)
A subsurface mine?	Greater than 5 (mi.)
A (non-karst) unstable area?	Zero feet, overlying, or within area
Categorize the risk of this well/site being in a karst geology.	Medium
A 100-year floodplain?	Zero feet, overlying, or within area
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the Dagger Draw Trunk Line release site.

Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. In addition, on May 6, 2024, an investigative soil boring was drilled nearby in an effort to determine if shallow groundwater is present in the area. The soil boring was advanced to a total depth of approximately 55 feet bgs and left open for over 72 hours. No indications of inflow and/or accumulation of water were noted during the advancement of the soil boring or prior to plugging and abandonment. In addition, a groundwater gauging event conducted on May 9, 2024, confirmed that the borehole was dry. The location of the investigative soil bore is depicted in Figures 2A, 2B, and 4. A drilling log is provided in Appendix A.

A cave and karst study of the affected area was conducted by a third-party environmental contractor on July 16 and July 21, 2024. According to the *Cave and Karst Resource Inventory Report* dated August 23, 2024 (henceforth, "Karst Survey"), there are "no surface karst features within 200 feet (61 meters) of the spill delineation boundary. Pseudokarst (soil piping) was observed within the survey area. While not karst, soil piping still presents a trip and fall hazard for personnel, and tipping hazard for equipment and should be avoided if possible. The lack of surface karst features does not mean the area is not karstified and the survey area may still contain buried karst features." The *Karst Survey* is provided as Appendix F.

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



### 3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Closure Criteria and NMOCD Reclamation Standards for the Dagger Draw Trunk Line release site are listed in the table on the following page.

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
Between 51 and 75 (ft.)	Chloride (Cl-)	EPA** 300.0 or SM4500 Cl B	600	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	100	100
	Gas Range Organics + Diesel Range Organics (GRO+DRO)	EPA SW-846 Method 8015M	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)

\*\* Environmental Protection Agency

† Table I, Section 19.15.29.12 of the New Mexico Administrative Code (NMAC).

‡ The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas. Section 19.15.29.13 D.(1) NMAC.

### 4.0 REMEDIATION ACTIVITIES SUMMARY

Requesting a remediation plan approval with this submission?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Have the lateral and vertical extents of contamination been fully delineated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Was this release entirely contained within a lined containment area?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
On what estimated date will (or did) the remediation commence?	3/27/2024	
On what date will (or did) the final sampling or liner inspection occur?	7/31/2024	
On what date will (or was) the remediation complete(d)?	7/31/2024	
What is the total surface area (sq. ft.) in need of or that will <i>eventually</i> be reclaimed?	25,540	
What is the total volume (cy) in need of or that will <i>eventually</i> be reclaimed?	3,784	
What was the total surface area (sq. ft.) that has or will be remediated?	25,540	
What was the total volume (cy) that has or will be remediated?	4,940	
This remediation utilized the following processes to remediate/reduce contaminants:		
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(In Situ) Soil Vapor Extraction	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Ground Water Abatement pursuant to 19.15.30 NMAC	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Other (Non-listed remedial process)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Which OCD approved facility was or will be used for off-site disposal?	R360 Halfway Facility	
NMOCD Disposal Facility ID?	FEEM0112334510	
Summarize any additional remediation activities not included by answers above.	See below	

On March 27, 2024, remediation activities commenced at the Dagger Draw Trunk Line 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 chloride test kit were utilized to field-screen the horizontal and vertical extent of impacted soil and to guide the excavation. The sidewalls and floor of the excavation were advanced until field tests and field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria. Representative five-point composite confirmation soil samples were collected every 200 square feet from the sidewalls and floor of the excavated area to be submitted for laboratory analysis. A summary of soil sampling events conducted to date is provided in the table on the following page.

## Summary of Soil Sampling Events

Constituent	Highest Observable Concentration (mg/kg)	Sample ID	Sample Date	Sample Depth (ft bgs)	Soil Status
Chloride	25,200	FL 88 @ 8'	4/24/2024	8	In-Situ
TPH	180	FL 82 @ 8'	4/24/2024	8	In-Situ
GRO+DRO	154	FL 82 @ 8'	4/24/2024	8	In-Situ
BTEX	8.27	FL 70 @ 8'	4/24/2024	8	In-Situ
Benzene	0.0700	FL 70 @ 8'	4/24/2024	8	In-Situ

Please reference Table 1 for additional information.

On April 8, 2024, Etech collected 57 confirmation soil samples (FL 1 @ 3' through FL 10 @ 3', FL 12 @ 3' through FL 23 @ 3', FL 25 @ 3' through FL 29 @ 2.5', FL 32 @ 3' through FL 41 @ 2', FL 43 @ 2.5', FL 45 @ 4', FL 46 @ 2.5', FL 47 @ 3', FL 49 @ 2.5', NW 1 through NW 5, EW 1, EW 2, EW 3, SW 1 through SW 4, WW 1, WW 2, and WW 3) from the floor and sidewalls of the excavated area. The soil samples were submitted to a certified, commercial laboratory (henceforth, "the laboratory") for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards in each of the submitted soil samples, with the exception of sample FL 18 @ 3', which exceeded the NMOCD Closure Criterion for chloride. Based on these laboratory analytical results, the excavation was subsequently further advanced in the area characterized by soil sample FL 18 @ 3'.

On April 9, 2024, Etech collected two (2) confirmation soil samples (FL 24 @ 5' and FL 42 @ 6') from the floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria in each of the submitted soil samples.

On April 10, 2024, Etech collected six (6) confirmation soil samples (FL 11 @ 7', FL 30 @ 8', FL 31 @ 8', FL 48 @ 7.5', FL 50 @ 8', and FL 51 @ 8') from the floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria in each of the submitted soil samples.

On April 11, 2024, Etech collected 13 confirmation soil samples (FL 52 @ 6' through FL 64 @ 8') from the floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria in each of the submitted soil samples.

On April 16, 2024, Etech collected eight (8) confirmation soil samples (FL 18 @ 3.5', NW 6, NEW 1, NEW 2, NEW 3, SWW 1, SWW 2, and SWW 3) from the floor and sidewalls of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards in each of the submitted soil samples.

On April 24, 2024, Etech collected 28 confirmation soil samples (FL 65 @ 6' through FL 92 @ 8') from the floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated that BTEX and TPH concentrations were below the applicable NMOCD Closure Criteria in each of the submitted soil samples, with the exception of sample FL 82 @ 8', which exceeded the NMOCD Closure Criterion for TPH. Chloride concentrations in soil samples FL 68 @ 8' through FL 92 @ 8' exceeded the NMOCD Closure Criterion.

On April 24, 2024, Etech advanced three (3) test trenches (TT 1, TT 2, and TT 3) in an effort to delineate the vertical extent of impacted soil in the areas characterized by soil samples FL 68 @ 8' through FL 92 @ 8'. During the advancement of the test trenches, soil samples were collected at increments of two (2) feet and field-screened for the presence of Volatile Organic Compounds (VOCs) utilizing olfactory/visual senses and/or concentrations of chloride utilizing a Hach Quantab® chloride test kit. Based on field test observations and field test data, a total of 24 delineation soil samples (TT 1 @ 8' through TT 1 @ 28', TT 2 @ 8' through TT 2 @ 22', and TT 3 @ 8' through TT 3 @ 16') were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Based on laboratory analytical results, the vertical extent of impacted soil was adequately defined and ranged from approximately 14 feet bgs in trench TT 3 to approximately 28 feet bgs in trench TT 1. The horizontal extent of affected area was previously delineated via confirmation wall soil samples NW 6, NEW 1, NEW 2, NEW 3, SWW 1, SWW 2, and SWW 3.

The dimensions of the excavated area are approximately 236 to 354 feet in length, 14 to 110 feet in width, and 2 to 12.5 feet in depth. To date, Etech has transported approximately 4,940 cubic yards of impacted soil to an NMOCD-permitted surface waste facility for disposal.

The extent of the excavated area and the locations of the test trenches and composite confirmation soil samples are depicted in Figure 3, "Sample Location Map". Soil chemistry data is summarized in Table 1. Field data is provided in Appendix B. General photographs of the release site are provided in Appendix C. Laboratory analytical reports are provided in Appendix D. Copies of all regulatory correspondence are provided in Appendix G.

## 5.0 IN-SITU CHLORIDE MIGRATION MODELING

The affected area characterized by soil samples FL 68 @ 8' through FL 92 @ 8' and test trenches TT 1, TT 2, and TT 3 (henceforth, "Upper Excavation") is located within the bluff of an arroyo, which is inherently higher in elevation, of steeper grade, and more unstable than the surrounding topography. According to the aforementioned *Karst Survey*, "pseudokarst (soil piping) was identified within the aerial survey area, which may pose a hazard to equipment and personnel. Even though no surface karst features were found within the aerial karst survey boundary, this area has karst features nearby and may contain buried karst features....This area may be prone to rapid karst formation in the underlying stratigraphy and warrants careful planning and engineering to mitigate karst-forming processes that could be accelerated by poor planning and considerations." Excavation activities conducted to date have potentially further destabilized this inherently unstable area. In consideration of this information, Mewbourne Oil Company affirms that the Upper Excavation has been advanced to the extent practicable, and any excavation beyond eight (8) feet bgs poses a risk to human health and safety that exceeds the benefits of the removal of additional soil affected above the NMOCD Closure Criteria.

Etech utilized the EPA's Multimedia Exposure Assessment Model (MULTIMED) to determine if the chloride contamination remaining in-situ below eight (8) feet bgs in the Upper Excavation poses a threat to groundwater quality, as well as to simulate the efficacy of installing a clay liner on the floor of the excavated area. The most appropriate and conservative parameter values possible for the site were used for the assessment model in regard to depth to groundwater (56 feet bgs), depths investigated, etc. Additional parameter values were utilized that have been previously approved by the NMOCD as being representative of the general area and/or 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 166.8 mg/L in 500 years if a liner were installed on the floor of the excavation, versus 4,815 mg/L in 158 years if the excavation is not lined (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 models effectively demonstrate that the current excavation depth of eight (8) feet bgs and the installation of a clay liner provide an "equal or better protection of fresh water, public health and the environment" as compared to a deeper excavation.

## 6.0 VARIANCE REQUEST

Requesting a deferral of remediation closure due date with the approval of this submission?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Requesting a remediation closure approval with this submission?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Have the lateral and vertical extents of contamination been fully delineated?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Was this release entirely contained within a lined containment area?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the site's existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
What was the total surface area (sq. ft.) remediated?	25,540	
What was the total volume (cy) remediated?	4,940	

Pursuant to Section 19.15.29.14 NMAC, Mewbourne Oil Company requests a variance to install a two (2) foot clay liner on the floor of the Upper Excavation (see Figure 3). The clay layer will be wheel-rolled and compacted following installation. This engineered control is designed to inhibit the vertical migration of chloride contamination remaining in-situ and is additionally bolstered to an extent by the presence of naturally occurring soil layers composed of 10%-60% clay from approximately 15 to 55 feet bgs (see drilling log in Appendix A).

Mewbourne Oil Company also requests permission to backfill the lower portion of the excavation, characterized by sample points FL 1 @ 3' through FL 67 @ 8', NW 1 through NW 5, EW 1, EW 2, SW 1 through SW 4, WW 1, WW 2, and WW 3 (see Figure 3). Laboratory analytical results indicate that the affected area has been fully delineated both horizontally and vertically, and in-situ concentrations of BTEX, TPH, and chloride are below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards.

## 7.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste containing earthen material with concentrations of less than 600 mg/kg chloride, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg benzene?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Requesting a reclamation approval with this submission?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Requesting a restoration complete approval with this submission?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
What was the total surface area (sq. ft.) reclaimed?	0 (To be completed)	
What was the total volume (cy) reclaimed?	0 (To be completed)	

Upon receipt of all confirmation soil sample results and installation of the proposed clay liner, areas affected by remediation and closure activities will be substantially restored to the condition that existed prior to the release, to the extent practicable. Excavated areas will be backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected areas will be compacted and contoured to achieve erosion control, stability, and preservation of surface water flow, to the extent practicable. Affected areas not on production pads, pipeline rights-of-way, and/or lease roads will be revegetated with an agency and/or landowner-approved, certified weed-free seed mixture at a time conducive to germination. The seed will be installed at the prescribed rate utilizing either a seed drill or a broadcaster and harrow.

Upon completion of remediation and reclamation activities, a *Remediation Summary & Soil Closure Request* will be prepared detailing field activities and laboratory analytical results from confirmation soil samples.

## 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 Mewbourne Oil Company. Use of the information contained in this report is prohibited without the consent of Etech and/or Mewbourne Oil Company.

## **9.0 DISTRIBUTION**

***Mewbourne Oil Company***  
*4801 Business Park Blvd.*  
*Hobbs, NM 88240*

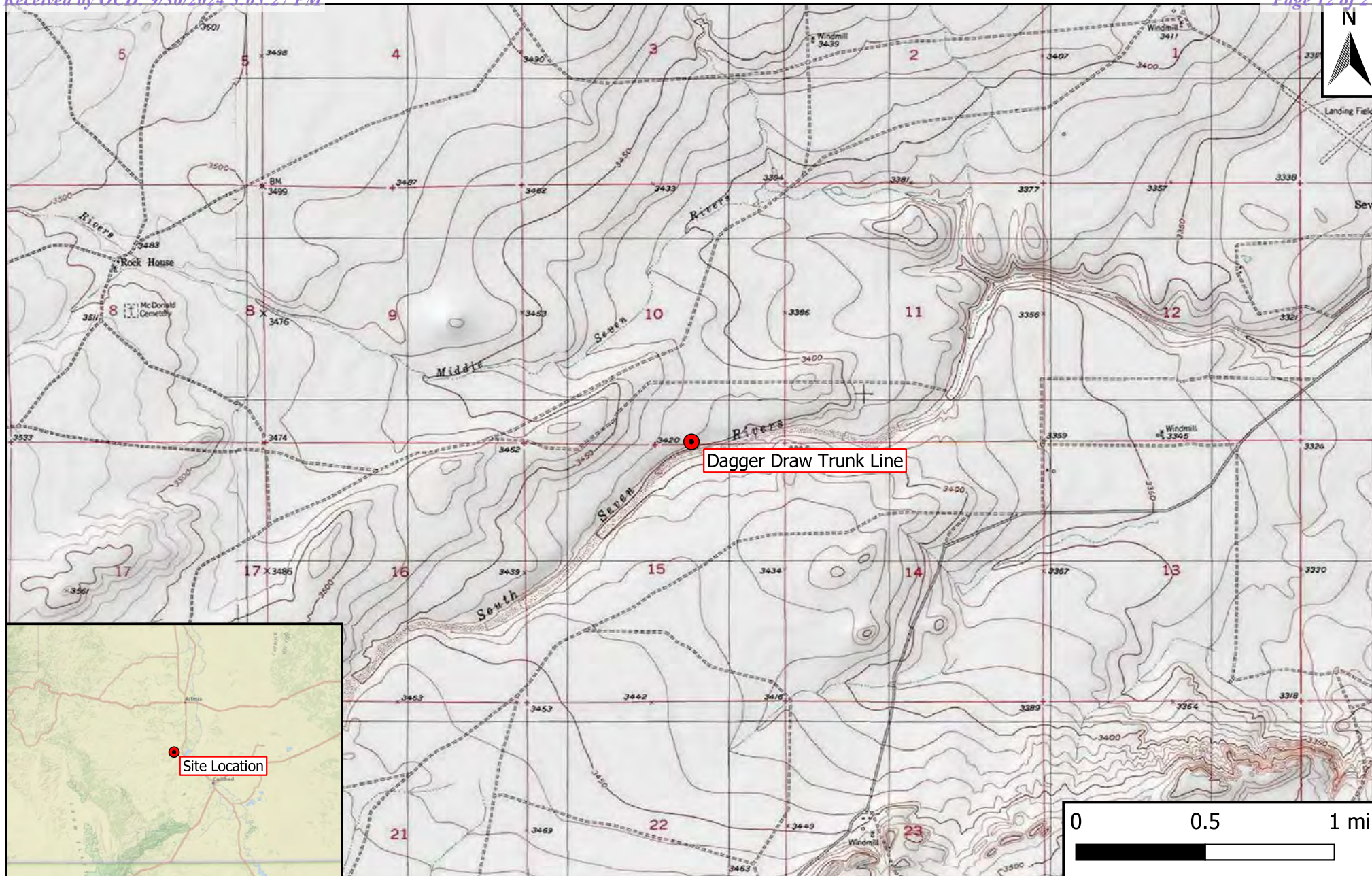
***New Mexico Energy, Minerals and Natural Resources Department***  
*Oil Conservation Division, District 2*  
*811 S. First Street*  
*Artesia, NM 88210*

*(Electronic Submission)*

## **Figure 1**

### **Site Location Map**





## Legend

- Site Location

**Figure 1**  
 Site Location Map  
 Mewbourne Oil Company  
 Dagger Draw Trunk Line  
 GPS: 32.580784, -104.470355  
 Eddy County, New Mexico



Drafted: bja

Checked: rlc

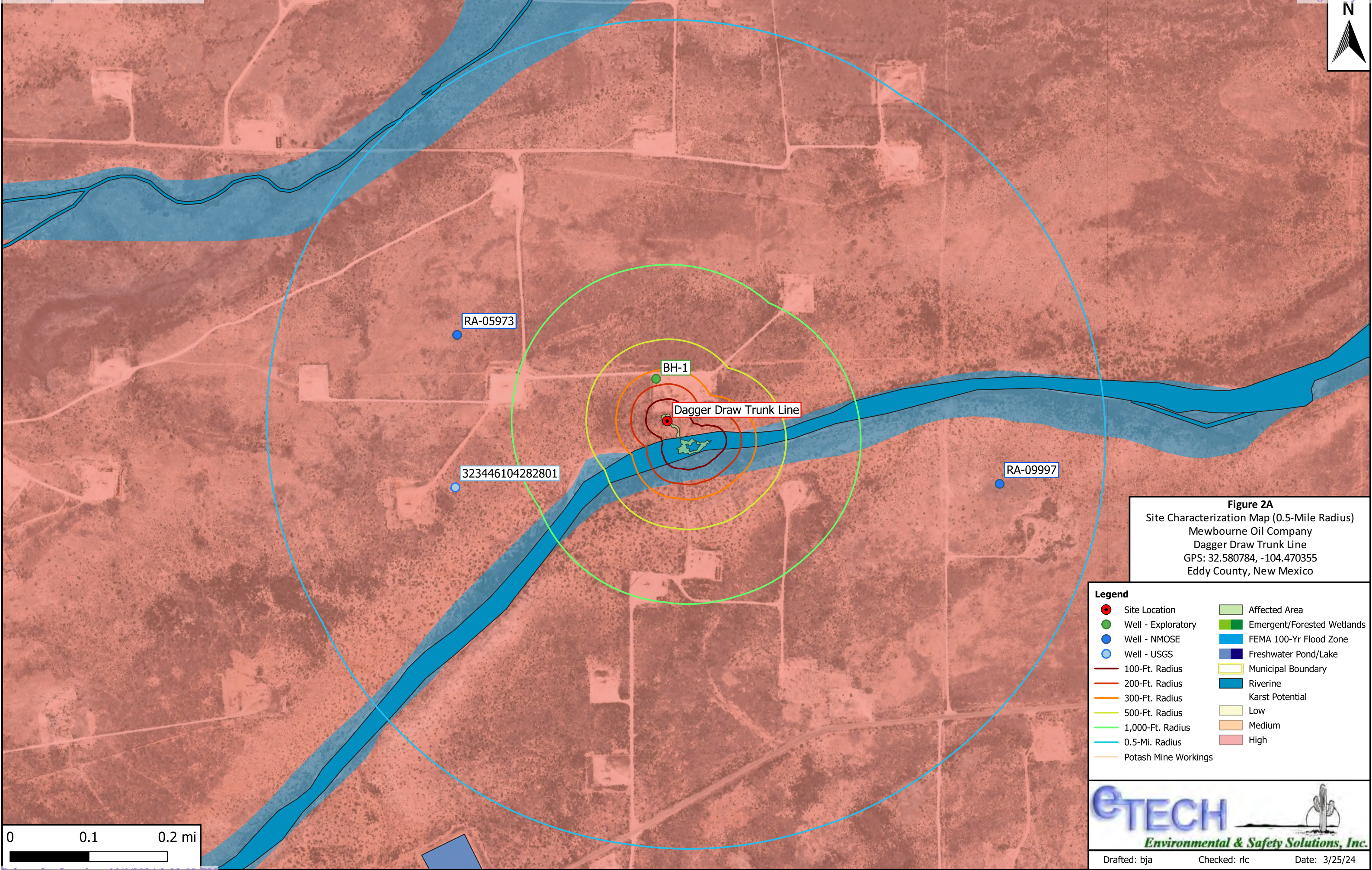
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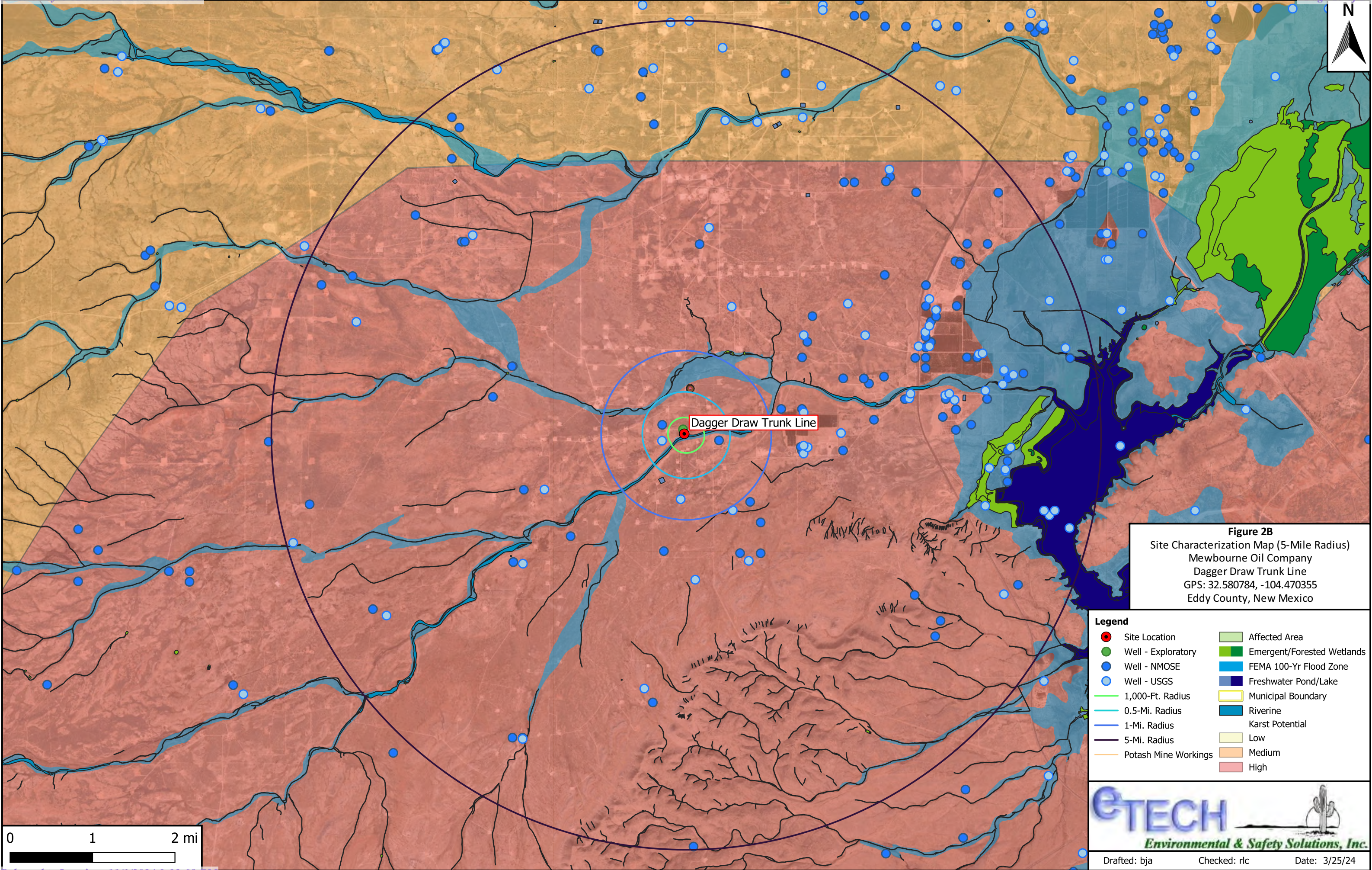
## **Figures 2A & 2B**

### **Site Characterization Maps**





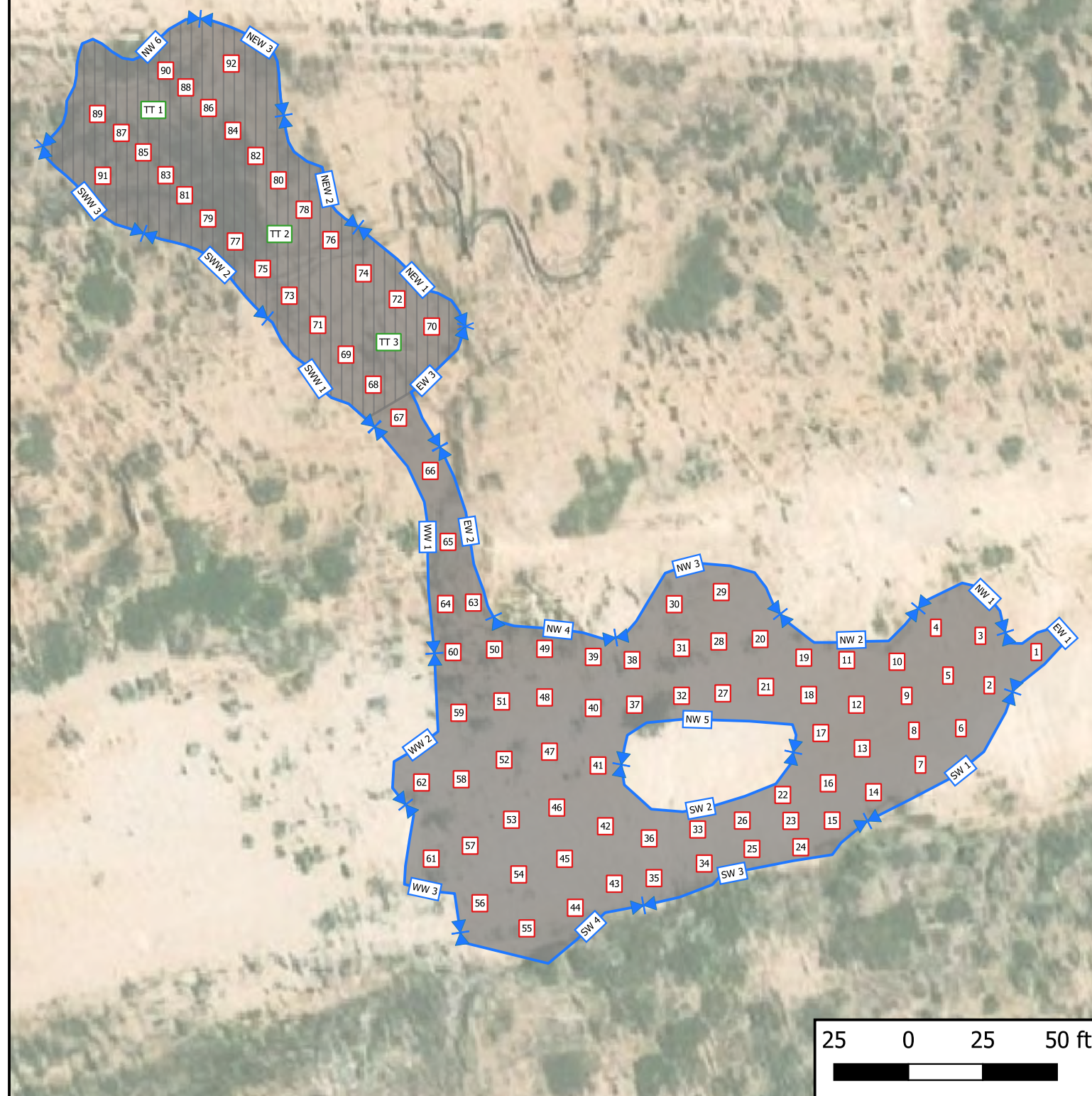






## **Figure 3**

### **Sample Location Map**



## Legend

- Excavation Extent (25,501 ft<sup>2</sup>)
- Proposed Clay Liner (8,273 ft<sup>2</sup>)
- Composite Floor Sample
- Composite Wall Sample
- Test Trench

**Figure 3**

Sample Location Map  
 Mewbourne Oil Company  
 Dagger Draw Trunk Line  
 GPS: 32.580784, -104.470355  
 Eddy County, New Mexico



Drafted: bja

Checked: lc

Date: 9/27/24

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

**Table 1**  
**Concentrations of BTEX, TPH & Chloride in Soil**  
**Mewbourne Oil Company**  
**Dagger Draw Trunk Line**  
**NMOCD Ref. #: nAPP2409454303**

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 <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
Delineation Samples											
TT 1 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	12.7	12.7	<10.0	12.7	22,400
TT 1 @ 10'	4/24/2024	10	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	15,600
TT 1 @ 12'	4/24/2024	12	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16,000
TT 1 @ 14'	4/24/2024	14	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	7,330
TT 1 @ 16'	4/24/2024	16	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	6,000
TT 1 @ 18'	4/24/2024	18	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	6,080
TT 1 @ 20'	4/24/2024	20	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	8,400
TT 1 @ 22'	4/24/2024	22	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	8,930
TT 1 @ 24'	4/24/2024	24	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	9,060
TT 1 @ 26'	4/24/2024	26	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,360
TT 1 @ 28'	4/24/2024	28	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
TT 2 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	30.6	30.6	<10.0	30.6	9,330
TT 2 @ 10'	4/24/2024	10	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	8,660
TT 2 @ 12'	4/24/2024	12	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	10,800
TT 2 @ 14'	4/24/2024	14	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	7,600
TT 2 @ 16'	4/24/2024	16	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	10,900
TT 2 @ 18'	4/24/2024	18	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	11,100
TT 2 @ 20'	4/24/2024	20	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,640
TT 2 @ 22'	4/24/2024	22	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
TT 3 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	928
TT 3 @ 10'	4/24/2024	10	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,580
TT 3 @ 12'	4/24/2024	12	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	7,460
TT 3 @ 14'	4/24/2024	14	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	416
TT 3 @ 16'	4/24/2024	16	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	288
Excavation Samples											
FL 1 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FL 2 @ 4.5'	4/8/2024	4.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 3 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
FL 4 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	12.2	12.2	<10.0	12.2	192
FL 5 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	29.7	29.7	<10.0	29.7	368
FL 6 @ 4'	4/8/2024	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
FL 7 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	368
FL 8 @ 5'	4/8/2024	5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
FL 9 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 10 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
FL 11 @ 7'	4/10/2024	7	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FL 12 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
FL 13 @ 4'	4/8/2024	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL 14 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FL 15 @ 4.5'	4/8/2024	4.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	352

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

Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

Red Border with Shading: Highest observed concentration.



**Table 1**  
**Concentrations of BTEX, TPH & Chloride in Soil**  
**Mewbourne Oil Company**  
**Dagger Draw Trunk Line**  
**NMOCD Ref. #: nAPP2409454303**

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 <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
FL 16 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	512
FL 17 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL 18 @ 3'	4/8/2024	3	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	736
FL 18 @ 3.5'	4/16/2024	3.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FL 19 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	256
FL 20 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	272
FL 21 @ 4'	4/8/2024	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	320
FL 22 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
FL 23 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	10.1	10.1	<10.0	10.1	192
FL 24 @ 5'	4/9/2024	5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FL 25 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
FL 26 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FL 27 @ 2.5'	4/8/2024	2.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL 28 @ 2.5'	4/8/2024	2.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
FL 29 @ 2.5'	4/8/2024	2.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 30 @ 8'	4/10/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL 31 @ 8'	4/10/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FL 32 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	11.4	11.4	<10.0	11.4	112
FL 33 @ 2.5'	4/8/2024	2.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
FL 34 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
FL 35 @ 5'	4/8/2024	5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	496
FL 36 @ 2.5'	4/8/2024	2.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL 37 @ 5'	4/8/2024	5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 38 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 39 @ 4'	4/8/2024	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
FL 40 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	19.5	19.5	<10.0	19.5	128
FL 41 @ 2'	4/8/2024	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 42 @ 6'	4/9/2024	6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 43 @ 2.5'	4/8/2024	2.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	384
FL 45 @ 4'	4/8/2024	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
FL 46 @ 2.5'	4/8/2024	2.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
FL 47 @ 3'	4/8/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
FL 48 @ 7.5'	4/10/2024	7.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL 49 @ 2.5'	4/8/2024	2.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
FL 50 @ 8'	4/10/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL 51 @ 8'	4/10/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FL 52 @ 6'	4/11/2024	6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FL 53 @ 12.5	4/11/2024	12.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	256
FL 54 @ 7'	4/11/2024	7	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
FL 55 @ 11'	4/11/2024	11	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FL 56 @ 7'	4/11/2024	7	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0

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

Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

Red Border with Shading: Highest observed concentration.



**Table 1**  
**Concentrations of BTEX, TPH & Chloride in Soil**  
**Mewbourne Oil Company**  
**Dagger Draw Trunk Line**  
**NMOCD Ref. #: nAPP2409454303**

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 <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
FL 57 @ 6'	4/11/2024	6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FL 58 @ 6'	4/11/2024	6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
FL 59 @ 2'	4/11/2024	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
FL 60 @ 3'	4/11/2024	3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 61 @ 2'	4/11/2024	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FL 62 @ 2'	4/11/2024	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FL 63 @ 6'	4/11/2024	6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
FL 64 @ 8'	4/11/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
FL 65 @ 6'	4/24/2024	6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FL 66 @ 6'	4/24/2024	6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FL 67 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	528
FL 68 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,090
FL 69 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,150
FL 70 @ 8'	4/24/2024	8	In-Situ	0.0700	8.27	47.3	11.3	58.6	<10.0	58.6	1,070
FL 71 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,040
FL 72 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,200
FL 73 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,800
FL 74 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,040
FL 75 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	7,840
FL 76 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	880
FL 77 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,240
FL 78 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	10,400
FL 79 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	21,400
FL 80 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	23,000
FL 81 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,640
FL 82 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	154	154	25.8	180	18,400
FL 83 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	8,000
FL 84 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	33.5	33.5	<10.0	33.5	9,000
FL 85 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	12,000
FL 86 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16,400
FL 87 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	8,800
FL 88 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	25,200
FL 89 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	12,000
FL 90 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	12,400
FL 91 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	7,100
FL 92 @ 8'	4/24/2024	8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	6,480
NW 1	4/8/2024	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NW 2	4/8/2024	0-7	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
NW 3	4/8/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
NW 4	4/8/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NW 5	4/8/2024	0-5	In-Situ	<0.050	<0.300	<10.0	10.9	10.9	<10.0	10.9	224

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

Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

Red Border with Shading: Highest observed concentration.

<b>Table 1</b> <b>Concentrations of BTEX, TPH &amp; Chloride in Soil</b> <b>Mewbourne Oil Company</b> <b>Dagger Draw Trunk Line</b> <b>NMOCD Ref. #: nAPP2409454303</b>											
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 <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
NW 6	4/16/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
NEW 1	4/16/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
NEW 2	4/16/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
NEW 3	4/16/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
EW 1	4/8/2024	0-3	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
EW 2	4/8/2024	0-6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	320
EW 3	4/8/2024	0-8	In-Situ	<0.050	<0.300	<10.0	66.9	66.9	<10.0	66.9	176
SW 1	4/8/2024	0-4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW 2	4/8/2024	0-6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW 3	4/8/2024	0-5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
SW 4	4/8/2024	0-11	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SWW 1	4/16/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	336
SWW 2	4/16/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	400
SWW 3	4/16/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
WW 1	4/8/2024	0-8	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	480
WW 2	4/8/2024	0-6	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
WW 3	4/8/2024	0-7	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0

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

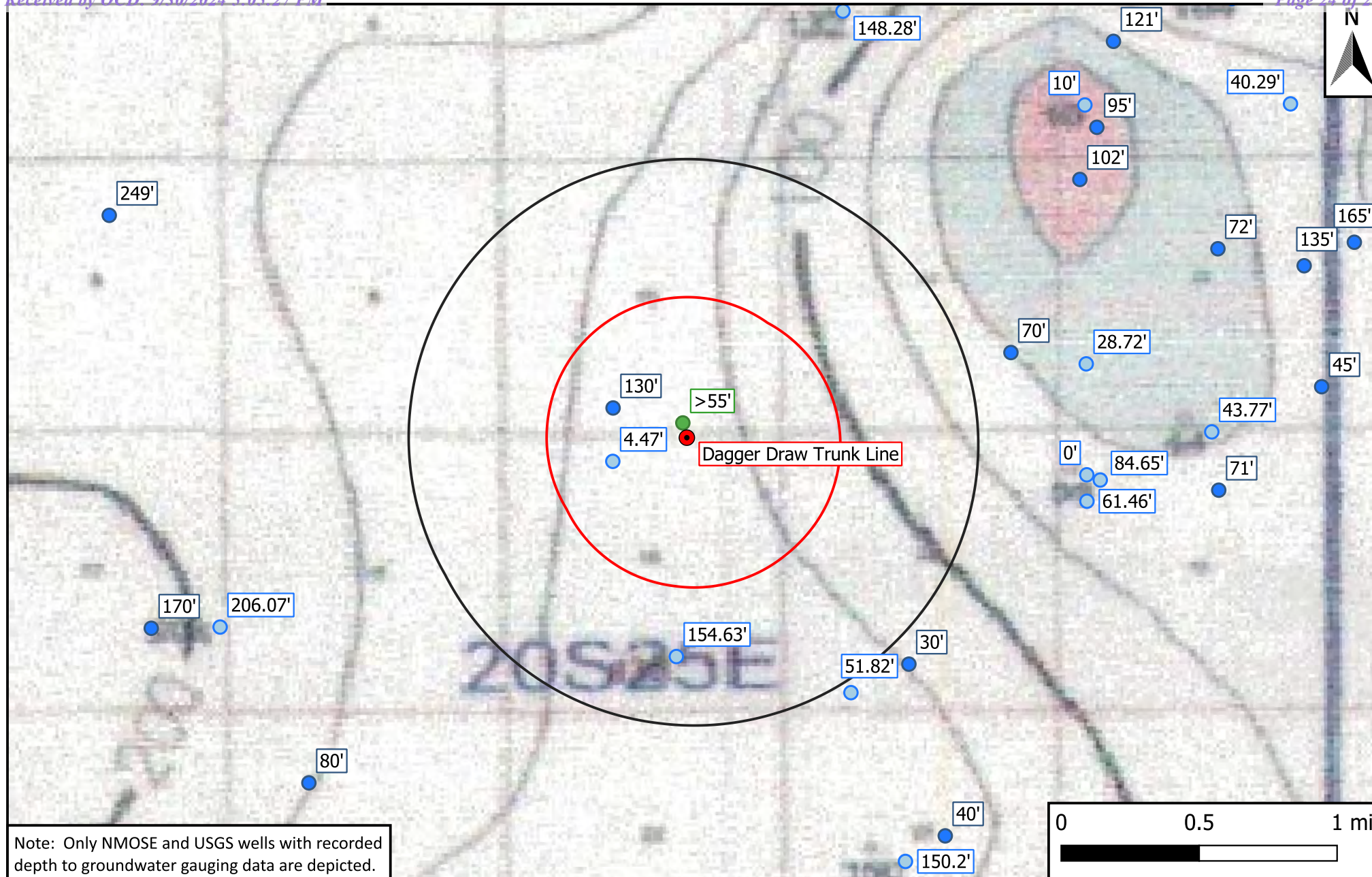
Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

Red Border with Shading: Highest observed concentration.

## **Appendix A**

### **Depth to Groundwater Information**



Legend

- Site Location
- Well - Exploratory
- Well - NMOSE
- Well - USGS
- 0.5-Mile Radius
- 1-Mile Radius

**Figure 4**

Inferred Depth to Groundwater Map  
Mewbourne Oil Company  
Dagger Draw Trunk Line  
GPS: 32.580784, -104.470355  
Eddy County, New Mexico



Drafted: bja







Checked: rlc

Date: 3/25/24





## Soil Boring/Temporary Monitor Well BH-1

<b>Company:</b> Mewbourne Oil Company			<b>Well/Borehole ID:</b> BH-1	<b>Drilling Company:</b> H&R Enterprises, LLC			
<b>Site:</b> Dagger Draw Trunk Line			<b>Coordinates (NAD 83):</b> 32.58156,-104.47062	<b>Driller:</b> Jim Hawley			
<b>NMOCD Reference #:</b> nAPP2409454303			<b>Drilling Date:</b> 5/6/2024	<b>Drilling Method:</b> Air Rotary			
<b>Location:</b> Eddy Co., NM			<b>Depth of Boring (ft):</b> 55	<b>Logged By:</b> Jim Hawley			
<b>PLSS:</b> U/L "O", Sec. 10, T20S, R25E			<b>Depth to Groundwater (ft):</b> >55	<b>Drafted By:</b> Ben J. Arguijo			
			<b>Plugging Date:</b> 5/9/2024	<b>Draft Date:</b> 5/10/2024			
<b>Completion:</b> N/A			<b>Casing:</b> 2" PVC	<b>Screen:</b> 0.020" Slotted			
<b>Comments:</b> N/A							
Depth (ft)	Groundwater	Lithology	Material Description	Petroleum Odor	Petroleum Stain	PID Reading	Well Construction
0			Topsoil 100%	N	N	-	
5			Soft Caliche 100%	N	N	-	
10				N	N	-	
15			Sand 90% - Clay 10%	N	N	-	
20			Sand 50% - Red Clay 50%	N	N	-	
25				N	N	-	
30				N	N	-	
35				N	N	-	
40			Grey Clay 60% - Sand 40%	N	N	-	
45			Red Clay 50% - Sand 50%	N	N	-	
50				N	N	-	
55			Notes: • Lines between material types represent approximate boundaries. Actual transitions may be gradual. • The exploratory soil boring was left open for over 72 hours. No indications of inflow and/or accumulation of water were noted during the advancement of the soil boring or prior to plugging and abandonment.				
60							

**Disclaimer** This bore log is intended for environmental not geotechnical purposes.



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water


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

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">RA 05973</a>		RA	ED	4	3	10	20S	25E		549280	3605111		501	200	130 70

Average Depth to Water: **130 feet**

Minimum Depth: **130 feet**

Maximum Depth: **130 feet**

**Record Count:** 1

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 549736.45

**Northing (Y):** 3604903.78

**Radius:** 804.67

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.

3/22/24 12:23 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER



# New Mexico Office of the State Engineer

## Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	RA 05973	4	3	10	20S	25E	549280	3605111	

---

**Driller License:** 1532      **Driller Company:** HENRY TERPENING

**Driller Name:** TERPENING, HENRY

**Drill Start Date:** 02/21/1977      **Drill Finish Date:** 03/25/1977      **Plug Date:**

**Log File Date:** 05/10/1977      **PCW Rcv Date:**      **Source:** Shallow

**Pump Type:**      **Pipe Discharge Size:**      **Estimated Yield:**

**Casing Size:**      **Depth Well:** 200 feet      **Depth Water:** 130 feet

---

**Meter Number:** 14130      **Meter Make:** MASTER

**Meter Serial Number:** GRR-26      **Meter Multiplier:** 100.0000

**Number of Dials:** 6      **Meter Type:** Diversion

**Unit of Measure:** Gallons      **Return Flow Percent:**

**Usage Multiplier:**      **Reading Frequency:**

---

**Meter Readings (in Acre-Feet)**

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
07/15/2010	2010	0	A	sj		0
07/15/2010	2010	3111	A	sj		0.955

---

**\*\*YTD Meter Amounts:**

Year	Amount
2010	0.955

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.

3/22/24 12:24 PM

POINT OF DIVERSION SUMMARY



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## National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

GO

[Click for News Bulletins](#)

[Groundwater levels for the Nation](#)

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

### Search Results -- 1 sites found

Agency code = usgs

site\_no list =

- 323446104282801

Minimum number of levels = 1

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

### USGS 323446104282801 20S.25E.15.12113

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°34'46", Longitude 104°28'28" NAD27

Land-surface elevation 3,427 feet above NAVD88

The depth of the well is 383 feet below land surface.

This well is completed in the Roswell Basin aquifer system (S400RSWLBS) national aquifer.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

#### Output formats

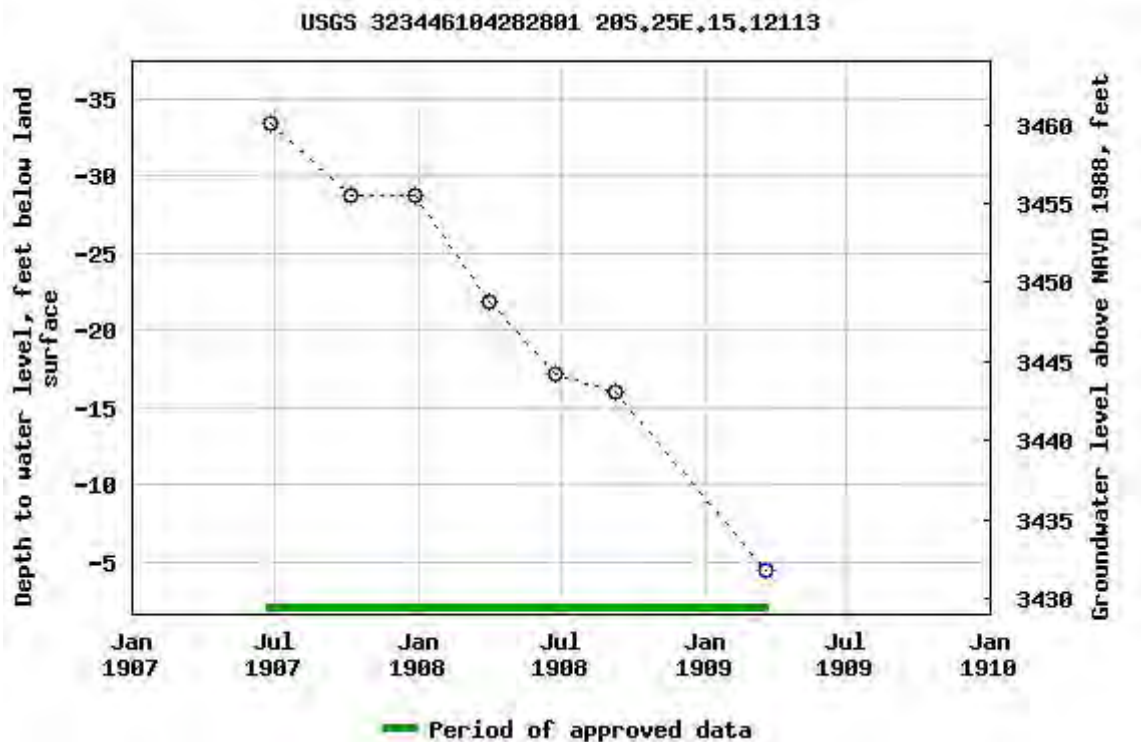
[Table of data](#)

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

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**Title: Groundwater for USA: Water Levels**

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



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Page Last Modified: 2024-03-22 14:22:27 EDT

0.62 0.55 nadww02



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## National Water Information System: Web Interface

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Data Category:

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### Search Results -- 1 sites found

Agency code = usgs

site\_no list =

- 323409104281401

Minimum number of levels = 1

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

### USGS 323409104281401 20S.25E.15.34222

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°34'09", Longitude 104°28'14" NAD27

Land-surface elevation 3,436 feet above NAVD88

The depth of the well is 600 feet below land surface.

This well is completed in the Roswell Basin aquifer system (S400RSWLBS) national aquifer.

This well is completed in the Artesia Group (313ARTS) local aquifer.

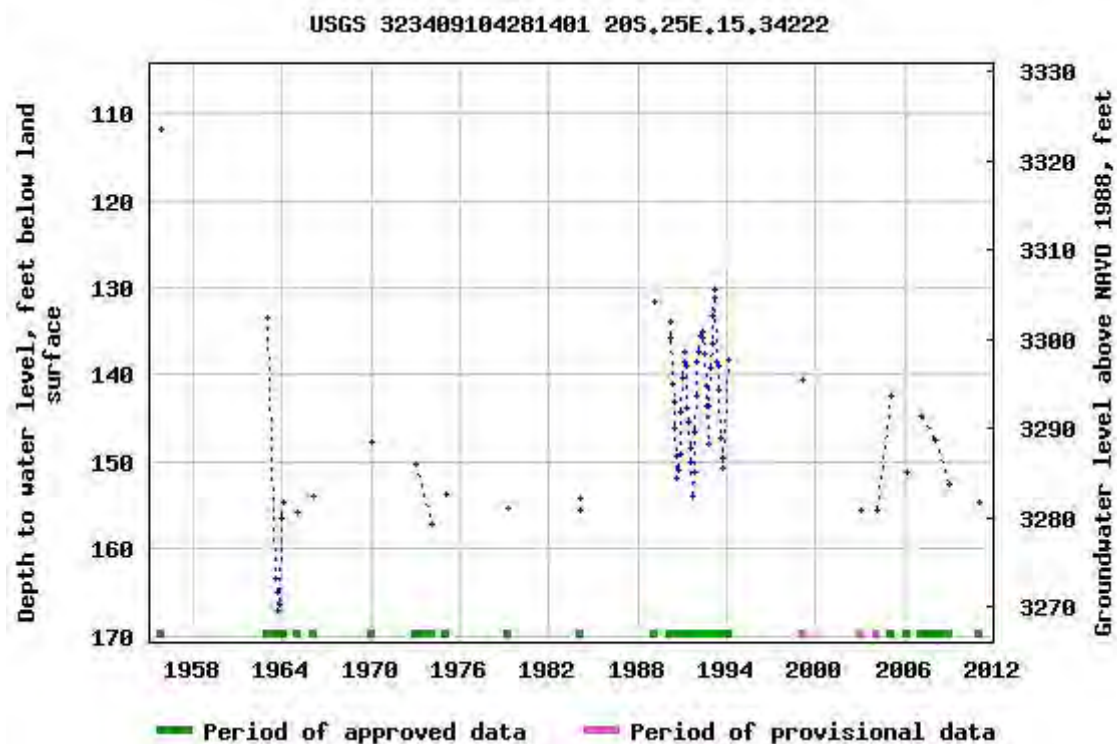
#### Output formats

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[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.  
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**Title: Groundwater for USA: Water Levels**

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



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

Page Last Modified: 2024-03-22 14:22:27 EDT

0.65 0.55 nadww02

## **Appendix B**

### **Field Data**



## Sample Log

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

Project: Dagger Draw Trunk Line

Project Number: 20174

Latitude: 32.580475

Longitude: -104.470077

Sample ID	PID/Odor	Chloride Conc.	Pid	GPS	
NW test	Light	3168	EW 2	-	660
FL test	Strong	228	Floor test	-	2840
FL test	-	2480	Floor test	-	2840
EW-1	-	228 ★	EW test	-	716
NW-1	-	412 ★	FL-9 @ 2½	Strong	6.624
FL-1 @ 2½	-	1056	FL-10 @ 2½	Strong	6.624
FL-2 @ 2½	-	990	Floor test	-	11.32
FL-3 @ 2½	-	1312	NW test	-	604
SW-1	Strong	368	EW test	-	332
SW1	Light	604	East Floor test	-	412
NW test	-	1732	West Floor test	-	368
SW test	Strong	2480	NW 3	-	292
SW 1	-	1312	NW 4	-	172
NW test	Strong	1992	FL-11 @ 2½	-	
SW test	-	990	FL-12 @ 2½	-	
FL-5 @ 2½	Strong/Gas	2480	FL-13 @ 2½	-	
FL-4 @ 2½	-	2490			
SW test	-	908			
SW test	-	604			
SW-1	-	412 ★			
SW test	Strong/Gas	2840			
NWest wall test	-	292			
NW test	Dirt-	716			
FL-6 @ 2½	Strong/Gas	1860			
FL-7 @ 2½	Light/Gas	1196			
FL-8 @ 2½	Strong/Gas	2840			
SW test	-	840			
SW-2	-	1860			
NW-2	-	260 ★			
NW 3	/Gas	552			
SW3 test	Light? Gas	368 ★			
EW 2	-	368 ★			
NW1	-	412 ★			
NW 3	-	2840			
NW test	-	604			
West wall Floor	-	9084			

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 Area





## Sample Log

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

Project: \_\_\_\_\_

Project Number: \_\_\_\_\_ Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Sample ID	PID/Odor	Chloride Conc.	GPS
FL 11 @ 5'	6.8 NONE	1,616	
FL 24 @ 5'	3.8 NONE	552	
FL 30 @ 6'	7.8 Light	2,480	
FL 31 @ 6'	7.2 Light	1,956	
FL 42 @ 6'	3.4 NONE	452	
FL 48 @ 6'	7.8 Light	2,480	
FL 51 @ 6'	5.0 Light	896	
FL 50 @ 7'	5.0 NONE	896	
FL 48 @ 6 1/2'	7.8 Light	2,480	
FL 51 @ 6 1/2'	5.6 NONE	1,116	
FL 11 @ 5 1/2'	6.0 NONE	1,284	
FL 30 @ 6 1/2'	6.0 Light	1,284	
FL 31 @ 6 1/2'	4.2 NONE	652	
FL 48 @ 7'	7.8 NONE	2,480	
FL 50 @ 7 1/2'	6.6 NONE	1,572	
FL 51 @ 7'	4.4 NONE	712	
FL 11 @ 6'	6.0 NONE	1,284	
FL 30 @ 7'	7.8 NONE	2,480	
FL 31 @ 7'	4.7 NONE	652	
FL 51 @ 7 1/2'	5.0 NONE	896	
FL 11 @ 6 1/2'	NONE	2,296	
FL 30 @ 7 1/2'	NONE	1,192	
FL 31 @ 7 1/2'	NONE	2,476	
FL 51 @ 8'	NONE	208	
FL 48 @ 7 1/2'	NONE	176	
FL 30 @ 8'	NONE	312	
FL 31 @ 8'	NONE	208	
FL 50 @ 8'	NONE	352	
FL 11 @ 7'	NONE	176	
FL 52 @ 2'	Strong	2,984	
FL 53 @ 2'	Light	4,184	
FL 54 @ 2'	NONE	4,128	
FL 55 @ 2'	Strong	3,816	
FL 52 @ 3'	Light	2,304	
FL 53 @ 3'	Strong	3,520	
FL 54 @ 3'	Strong	4,092	
		4,468	

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

FL-52@4' - 892

FL-53@4' - 2476

FL-54@4' - 1,404

FL-55@4' - 964

4.8

5.6

5.0

5.4

FL-67@8' - 552

FL-68@8' - 1,136

FL-69@8' - 604

FL-70@8' - 2,480

FL-71@8' - 980

FL-72@8' - 1,136

FL-73@8' - 1,508

FL-74@8' - 1,136

FL-75@8' - 2,480

FL-76@8' - 2,480

FL-77@8' - 2,140

FL-78@8' - 1,732

FL-79@8' - 1,860

FL-80@8' - 1,508

FL-81@8' - 1,312

FL-82@8' - 1,732



FL-83@8'-3,520

FL-84@8'-2,984

FL-85@8'-4,128

FL-86@8'-3,168

FL-87@8'-4,448

FL-88@8'-3,520

FL-89@8'-3,768

FL-90@8'-2,984

FL-91@8'-4,128


FL-92@8'-4,824




## **Appendix C**


### **Photographic Log**


## Photographic Log

<b>Photo Number:</b> 1	
<b>Photo Direction:</b> Overhead/Bird's Eye	
<b>Coordinates:</b> 32.580980,-104.470294	
<b>Date Taken:</b> 4/24/2024	
<b>Photo Description:</b>  Aerial view of a portion of the excavated area.	

<b>Photo Number:</b> 2	
<b>Photo Direction:</b> Overhead/Bird's Eye	
<b>Coordinates:</b> 32.580793,-104.470289	
<b>Date Taken:</b> 4/24/2024	
<b>Photo Description:</b>  Aerial view of a portion of the excavated area.	


## Photographic Log


<b>Photo Number:</b> 3	
<b>Photo Direction:</b> Southwest	
<b>Coordinates:</b> 32.580558,-104.470429	
<b>Date Taken:</b> 4/24/2024	
<b>Photo Description:</b>  Aerial view of karst features near the excavated area.	

<b>Photo Number:</b> 4	
<b>Photo Direction:</b> North-Northeast	
<b>Coordinates:</b> 32.580366,-104.470387	
<b>Date Taken:</b> 4/24/2024	
<b>Photo Description:</b>  Aerial view of karst features near the excavated area.	




## Photographic Log

<b>Photo Number:</b> 5	
<b>Photo Direction:</b> North	
<b>Coordinates:</b> 32.580547,-104.469387	
<b>Date Taken:</b> 4/24/2024	
<b>Photo Description:</b>  Aerial view of karst features near the excavated area.	

<b>Photo Number:</b> 6	
<b>Photo Direction:</b> Overhead/Bird's Eye	
<b>Coordinates:</b> 32.580331,-104.470666	
<b>Date Taken:</b> 4/24/2024	
<b>Photo Description:</b>  Aerial view of karst features near the excavated area.	

## Photographic Log

<b>Photo Number:</b> 7	
<b>Photo Direction:</b> Northeast	
<b>Photo Description:</b>  View of the excavated area.	

<b>Photo Number:</b> 8	
<b>Photo Direction:</b> South-Southwest	
<b>Photo Description:</b>  View of the excavated area.	



## Photographic Log

<b>Photo Number:</b> 9	 <p>24Apr24 11:19: MOC - Dagger Draw SWD Line Karst Images Artesia NM 88210, United States © 24-Apr-24 11:19:15</p>
<b>Photo Direction:</b> Southeast	
<b>Photo Description:</b>  View of the excavated area.	

<b>Photo Number:</b> 10	 <p>24Apr24 11:19: MOC - Dagger Draw SWD Line Karst Images Artesia NM 88210, United States © 24-Apr-24 11:19:22</p>
<b>Photo Direction:</b> South-Southeast	
<b>Photo Description:</b>  View of the excavated area.	




## Photographic Log

<b>Photo Number:</b> 11	
<b>Photo Direction:</b> South	
<b>Photo Description:</b>  View of the excavated area.	

<b>Photo Number:</b> 12	
<b>Photo Direction:</b> Southeast	
<b>Photo Description:</b>  View of the excavated area.	

Photographic Log

<b>Photo Number:</b> 13	
<b>Photo Direction:</b> North	
<b>Photo Description:</b>  View of karst features near the excavated area.	

<b>Photo Number:</b> 14	
<b>Photo Direction:</b> West-Northwest	
<b>Photo Description:</b>  View of karst features near the excavated area.	

## **Appendix D**

### **Laboratory Analytical Reports**



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

April 11, 2024

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: DAGGER DRAW TRUNK LINE

Enclosed are the results of analyses for samples received by the laboratory on 04/08/24 14:45.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 1 @ 3' (H241811-01)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/10/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 83.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.7 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 2 @ 4.5' (H241811-02)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/10/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 80.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 3 @ 3' (H241811-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	04/10/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 81.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.2 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 4 @ 3' (H241811-04)**

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	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	04/10/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	12.2	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 69.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 5 @ 3' (H241811-05)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	04/10/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	29.7	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 81.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.3 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 6 @ 4' (H241811-06)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	04/10/2024	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	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 81.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.1 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 7 @ 3' (H241811-07)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	04/10/2024	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	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 80.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.6 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 8 @ 5' (H241811-08)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	04/10/2024	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	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 72.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.3 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 9 @ 3' (H241811-09)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/10/2024	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	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 81.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.0 % 49.1-148

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 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 10 @ 3' (H241811-10)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/10/2024	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	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 81.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.9 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 12 @ 3' (H241811-11)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/10/2024	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	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 72.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 13 @ 4' (H241811-12)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	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	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 72.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 14 @ 3' (H241811-13)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.3	2.00	0.557		
Toluene*	<0.050	0.050	04/09/2024	ND	2.00	99.9	2.00	1.76		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	1.94	97.0	2.00	1.63		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	5.91	98.4	6.00	0.989		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	04/10/2024	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	04/09/2024	ND	231	116	200	2.26	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	225	113	200	0.829	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 81.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 15 @ 4.5' (H241811-14)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210		
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 79.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 16 @ 3' (H241811-15)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 79.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
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 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 17 @ 3' (H241811-16)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 84.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 18 @ 3' (H241811-17)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	736	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 88.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
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 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 19 @ 3' (H241811-18)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 77.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.8 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 20 @ 3' (H241811-19)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 86.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 21 @ 4' (H241811-20)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 87.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 22 @ 3' (H241811-21)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210		
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	176	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 74.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 23 @ 3' (H241811-22)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	10.1	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 80.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 25 @ 3' (H241811-23)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 69.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 68.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 26 @ 3' (H241811-24)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 76.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.1 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 27 @ 2.5' (H241811-25)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 78.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.6 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 28 @ 2.5' (H241811-26)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 66.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 64.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 29 @ 2.5' (H241811-27)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 76.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 32 @ 3' (H241811-28)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	11.4	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 81.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 33 @ 2.5' (H241811-29)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210		
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 75.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 34 @ 3' (H241811-30)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 84.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 35 @ 5' (H241811-31)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 82.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.6 % 49.1-148

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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 36 @ 2.5' (H241811-32)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 87.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.4 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 37 @ 5' (H241811-33)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.12	106	2.00	0.210	
Toluene*	<0.050	0.050	04/09/2024	ND	2.24	112	2.00	2.37	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.29	115	2.00	2.87	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	6.84	114	6.00	3.15	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/10/2024	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	04/09/2024	ND	243	122	200	2.21	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	238	119	200	1.69	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 81.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 38 @ 3' (H241811-34)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 129 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 78.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 39 @ 4' (H241811-35)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37	
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 131 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 75.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 40 @ 3' (H241811-36)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37	
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	19.5	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 78.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.0 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 41 @ 2' (H241811-37)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37	
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 61.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 59.4 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 43 @ 2.5' (H241811-38)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 126 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 77.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.0 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 45 @ 4' (H241811-39)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37	
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 126 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 79.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.5 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 46 @ 2.5' (H241811-40)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37	
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 86.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.1 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 47 @ 3' (H241811-41)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37	
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 77.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.7 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 49 @ 2.5' (H241811-42)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 79.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.7 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NW 1 (H241811-43)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 75.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 72.5 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NW 2 (H241811-44)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 81.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.1 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NW 3 (H241811-45)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/10/2024	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	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 57.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 52.4 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NW 4 (H241811-46)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 126 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 82.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NW 5 (H241811-47)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	10.9	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 83.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 1 (H241811-48)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 126 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 76.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.8 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 2 (H241811-49)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37	
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31	
Total BTEX	<0.300	0.300	04/09/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 124 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 72.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 66.2 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 3 (H241811-50)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 83.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.8 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW 4 (H241811-51)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 74.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 69.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: EW 1 (H241811-52)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 82.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.0 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: EW 2 (H241811-53)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	2.25	113	2.00	4.37		
Toluene*	<0.050	0.050	04/09/2024	ND	2.31	116	2.00	3.01		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.35	117	2.00	0.473		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.09	118	6.00	1.31		
Total BTEX	<0.300	0.300	04/09/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 127 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	223	111	200	1.29	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	226	113	200	3.57	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 69.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 63.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: EW 3 (H241811-54)**

BTEx 8021B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39	
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66	
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48	
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03	
Total BTEX	<0.300	0.300	04/09/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	04/10/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	66.9	10.0	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 75.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.6 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WW 1 (H241811-55)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39		
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	480	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 68.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 61.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WW 2 (H241811-56)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39		
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 58.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 50.5 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/08/2024  
 Reported: 04/11/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE - 32.580475,-104.470077

Sampling Date: 04/08/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WW 3 (H241811-57)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/09/2024	ND	1.99	99.4	2.00	1.39		
Toluene*	<0.050	0.050	04/09/2024	ND	2.29	114	2.00	6.66		
Ethylbenzene*	<0.050	0.050	04/09/2024	ND	2.42	121	2.00	8.48		
Total Xylenes*	<0.150	0.150	04/09/2024	ND	7.29	122	6.00	9.03		
Total BTEX	<0.300	0.300	04/09/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/10/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/09/2024	ND	212	106	200	2.43	
DRO >C10-C28*	<10.0	10.0	04/09/2024	ND	203	102	200	0.231	
EXT DRO >C28-C36	<10.0	10.0	04/09/2024	ND					

Surrogate: 1-Chlorooctane 66.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 58.4 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 60 of 65

Company Name: Etech Environmental & Safety Solutions, Inc.										<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																	
Project Manager: Lance Crenshaw										P.O. #:		<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>																	
Address: 2617 West Marland										Company: Mewbourne																			
City: Hobbs State: NM Zip: 88240										Attn: Connor Walker																			
Phone #: (575) 264-9884 Fax #:										Address:																			
Project #: 20174 Project Owner: Mewbourne										City:																			
Project Name: Dagger Draw Trunk Line										State: NM Zip:																			
Project Location: 32.580475, -104.470077										Phone #:																			
Sampler Name: Aaron Rios										Fax #:																			
FOR LAB USE ONLY																													
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													
H241811																													
1 FL 1 @ 3'				C	1			X				X			4/8/24		X	X	X										
2 FL 2 @ 4.5'				C	1			X				X			4/8/24		X	X	X										
3 FL 3 @ 3'				C	1			X				X			4/8/24		X	X	X										
4 FL 4 @ 3'				C	1			X				X			4/8/24		X	X	X										
5 FL 5 @ 3'				C	1			X				X			4/8/24		X	X	X										
6 FL 6 @ 4'				C	1			X				X			4/8/24		X	X	X										
7 FL 7 @ 3'				C	1			X				X			4/8/24		X	X	X										
8 FL 8 @ 5'				C	1			X				X			4/8/24		X	X	X										
9 FL 9 @ 3'				C	1			X				X			4/8/24		X	X	X										
10 FL 10 @ 3'				C	1			X				X			4/8/24		X	X	X										
<p>PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>																													
Relinquished By:				Date: 4-8-24		Received By:				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Phone #:															
				Time: 1445						Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Fax #:															
Relinquished By:				Date:		Received By:				REMARKS:																			
				Time:																									
Delivered By: (Circle One)				#140		Sample Condition				CHECKED BY: (Initials)				Please email results and copy of CoC to pm@etechenv.com.															
Sampler - UPS - Bus - Other:				-4.8°C		Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No				20.																			

FORM-006  
Revision 1.0

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

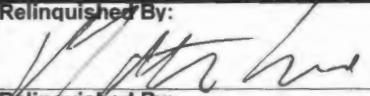



## ARDINAL LABORATORIES

**101 East Marland, Hobbs, NM 88240**

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																					
Project Manager: Lance Crenshaw				P.O. #:				<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>																					
Address: 2617 West Marland				Company: Mewbourne																									
City: Hobbs State: NM Zip: 88240				Attn: Connor Walker																									
Phone #: (575) 264-9884 Fax #:				Address:																									
Project #: 20174 Project Owner: Mewbourne				City:																									
Project Name: Dagger Draw Trunk Line				State: NM Zip:																									
Project Location: 32.580475, -104.470077				Phone #:																									
Sampler Name: Aaron Rios				Fax #:																									
FOR LAB USE ONLY																													
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	
H241811				C		1						X								X						4/8/24			
11		FL 12 @ 3'		C		1						X								X						4/8/24			
12		FL 13 @ 4'		C		1						X								X						4/8/24			
13		FL 14 @ 3'		C		1						X								X						4/8/24			
14		FL 15 @ 4.5'		C		1						X								X						4/8/24			
15		FL 16 @ 3'		C		1						X								X						4/8/24			
16		FL 17 @ 3'		C		1						X								X						4/8/24			
17		FL 18 @ 3'		C		1						X								X						4/8/24			
18		FL 19 @ 3'		C		1						X								X						4/8/24			
19		FL 20 @ 3'		C		1						X								X						4/8/24			
20		FL 21 @ 4'		C		1						X								X						4/8/24			
<small>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.</small>																													
Relinquished By: 				Date: 4-8-24				Received By: 				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Phone #:													
Time: 1445				Date:				Received By:				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Fax #:													
Relinquished By:				Date:				Received By:				REMARKS:																	
Time:																													
Delivered By: (Circle One)				#140				Sample Condition				CHECKED BY:				Please email results and copy of CoC to pm@etechenv.com.													
Sampler - UPS - Bus - Other:				-4.8°C				Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>				(Initials)																	
								Yes <input type="checkbox"/> No <input type="checkbox"/>				Yes <input type="checkbox"/> No <input type="checkbox"/>																	





# **CARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

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

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page 62 of 65

Company Name: Etech Environmental & Safety Solutions, Inc.										<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																							
Project Manager: Lance Crenshaw										P.O. #:		<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>																							
Address: 2617 West Marland										Company: Mewbourne																									
City: Hobbs State: NM Zip: 88240										Attn: Connor Walker																									
Phone #: (575) 264-9884 Fax #:										Address:																									
Project #: 20174 Project Owner: Mewbourne										City:																									
Project Name: Dagger Draw Trunk Line										State: NM Zip:																									
Project Location: 32.580475, -104.470077										Phone #:																									
Sampler Name: Aaron Rios										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							
H241811				C 1				X												X				4/8/24											
21		FL 22 @ 3'		C 1				X												X				4/8/24											
22		FL 23 @ 3'		C 1				X												X				4/8/24											
23		FL 25 @ 3'		C 1				X												X				4/8/24											
24		FL 26 @ 3'		C 1				X												X				4/8/24											
25		FL 27 @ 2.5'		C 1				X												X				4/8/24											
26		FL 28 @ 2.5'		C 1				X												X				4/8/24											
27		FL 29 @ 2.5'		C 1				X												X				4/8/24											
28		FL 32 @ 3'		C 1				X												X				4/8/24											
29		FL 33 @ 2.5'		C 1				X												X				4/8/24											
30		FL 34 @ 3'		C 1				X												X				4/8/24											
<p>PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>																																			
Relinquished By: <i>[Signature]</i>										Date: 4-8-24		Received By: <i>[Signature]</i>										Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:											
										Time: 1445												Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:											
Relinquished By:										Date:		Received By:										REMARKS:													
										Time:												Please email results and copy of CoC to pm@etechenv.com.													
Delivered By: (Circle One)										#140		Sample Condition										CHECKED BY:													
Sampler - UPS - Bus - Other:										- 4.8c		Cool Intact										(Initials)													
												<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										20.													
												<input type="checkbox"/> Yes <input type="checkbox"/> No																							

FORM-006  
Revision 1.0

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





## ARDINAL LABORATORIES

**101 East Marland, Hobbs, NM 88240**

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: Lance Crenshaw				P.O. #:				<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>																			
Address: 2617 West Marland				Company: Mewbourne																							
City: Hobbs State: NM Zip: 88240				Attn: Connor Walker																							
Phone #: (575) 264-9884 Fax #:				Address:																							
Project #: 20174 Project Owner: Mewbourne				City:																							
Project Name: Dagger Draw Trunk Line				State: NM Zip:																							
Project Location: 32.580475, -104.470077				Phone #:																							
Sampler Name: Aaron Rios				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													
4241811																											
31	FL 35 @ 5'	C	1			X				X			4/8/24		X	X	X										
32	FL 36 @ 2.5'	C	1			X				X			4/8/24		X	X	X										
33	FL 37 @ 5'	C	1			X				X			4/8/24		X	X	X										
34	FL 38 @ 3'	C	1			X				X			4/8/24		X	X	X										
35	FL 39 @ 4'	C	1			X				X			4/8/24		X	X	X										
36	FL 40 @ 3'	C	1			X				X			4/8/24		X	X	X										
37	FL 41 @ 2'	C	1			X				X			4/8/24		X	X	X										
38	FL 43 @ 2.5'	C	1			X				X			4/8/24		X	X	X										
39	FL 45 @ 4'	C	1			X				X			4/8/24		X	X	X										
40	FL 46 @ 2.5'	C	1			X				X			4/8/24		X	X	X										
<small>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.</small>																											
Relinquished By:		Date: 4-8-24		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:																			
Time: 1445		Time:		Signature: [Signature]		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																			
Relinquished By:		Date:		Received By:		REMARKS:																					
Time:		Time:																									
Delivered By: (Circle One)				Sample Condition				CHECKED BY:				Please email results and copy of CoC to pm@etechenv.com.															
Sampler - UPS - Bus - Other:				Cool Intact				(Initials)																			
#140				Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>				[Signature]																			
-4.8°C				Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>																							



# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.										<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>												
Project Manager: Lance Crenshaw										P.O. #:		<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>												
Address: 2617 West Marland										Company: Mewbourne														
City: Hobbs State: NM Zip: 88240										Attn: Connor Walker														
Phone #: (575) 264-9884 Fax #:										Address:														
Project #: 20174 Project Owner: Mewbourne										City:														
Project Name: Dagger Draw Trunk Line										State: NM Zip:														
Project Location: 32.580475, -104.470077										Phone #:														
Sampler Name: Aaron Rios										Fax #:														
FOR LAB USE ONLY																								
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV.		SAMPLING														
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME										
H241811																								
41	FL 47 @ 3'	C	1			X				X			4/8/24		X	X	X							
42	FL 49 @ 2.5'	C	1			X				X			4/8/24		X	X	X							
43	NW 1	C	1			X				X			4/8/24		X	X	X							
44	NW 2	C	1			X				X			4/8/24		X	X	X							
45	NW 3	C	1			X				X			4/8/24		X	X	X							
46	NW 4	C	1			X				X			4/8/24		X	X	X							
47	NW 5	C	1			X				X			4/8/24		X	X	X							
48	SW 1	C	1			X				X			4/8/24		X	X	X							
49	SW 2	C	1			X				X			4/8/24		X	X	X							
50	SW 3	C	1			X				X			4/8/24		X	X	X							
<small>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.</small>																								
Relinquished By:		Date: 4-8-24		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:																
		Time: 1445				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																
Relinquished By:		Date:		Received By:		REMARKS:																		
		Time:																						
Delivered By: (Circle One)				Sample Condition				CHECKED BY:				Please email results and copy of CoC to pm@etechenv.com.												
Sampler - UPS - Bus - Other:				Cool Intact				(Initials)																
				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																

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**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

April 15, 2024

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: DAGGER DRAW TRUNK LINE

Enclosed are the results of analyses for samples received by the laboratory on 04/09/24 14:45.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/09/2024  
 Reported: 04/15/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 24 @ 5' (H241838-01)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.12	106	2.00	1.37	
Toluene*	<0.050	0.050	04/10/2024	ND	2.22	111	2.00	2.30	
Ethylbenzene*	<0.050	0.050	04/10/2024	ND	2.27	114	2.00	2.93	
Total Xylenes*	<0.150	0.150	04/10/2024	ND	6.75	113	6.00	2.86	
Total BTX	<0.300	0.300	04/10/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/10/2024	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	201	101	200	1.43	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	202	101	200	6.25	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					

Surrogate: 1-Chlorooctane 76.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.4 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/09/2024  
 Reported: 04/15/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/09/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 42 @ 6' (H241838-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/10/2024	ND	2.12	106	2.00	1.37	
Toluene*	<0.050	0.050	04/10/2024	ND	2.22	111	2.00	2.30	
Ethylbenzene*	<0.050	0.050	04/10/2024	ND	2.27	114	2.00	2.93	
Total Xylenes*	<0.150	0.150	04/10/2024	ND	6.75	113	6.00	2.86	
Total BTEX	<0.300	0.300	04/10/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/10/2024	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	201	101	200	1.43	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	202	101	200	6.25	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					

Surrogate: 1-Chlorooctane 81.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

### Notes and Definitions

- QR-03      The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- ND      Analyte NOT DETECTED at or above the reporting limit
- RPD      Relative Percent Difference
- \*\*      Samples not received at proper temperature of 6°C or below.
- \*\*\*      Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.										<b>BILL TO</b>			<b>ANALYSIS REQUEST</b>																
Project Manager: Lance Crenshaw										P.O. #:			<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>																
Address: 2617 West Marland										Company: Mewbourne																			
City: Hobbs State: NM Zip: 88240										Attn: Connor Walker																			
Phone #: (575) 264-9884 Fax #:										Address:																			
Project #: 20174 Project Owner: Mewbourne										City:																			
Project Name: Dagger Draw Trunk Line										State: NM Zip:																			
Project Location: 32.580475, -104.470077										Phone #:																			
Sampler Name: Aaron Rios										Fax #:																			
FOR LAB USE ONLY																													
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	
H241838				C		1						X								X						4/9/24			
2		FL 42 @ 6'		C		1						X								X						4/9/24			



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

April 15, 2024

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: DAGGER DRAW TRUNK LINE

Enclosed are the results of analyses for samples received by the laboratory on 04/10/24 14:46.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/10/2024  
 Reported: 04/15/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/10/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 11 @ 7' (H241866-01)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2024	ND	2.13	107	2.00	0.427	
Toluene*	<0.050	0.050	04/11/2024	ND	2.27	114	2.00	0.197	
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.33	117	2.00	0.405	
Total Xylenes*	<0.150	0.150	04/11/2024	ND	7.00	117	6.00	0.382	
Total BTEX	<0.300	0.300	04/11/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/11/2024	ND	203	101	200	1.76	
DRO >C10-C28*	<10.0	10.0	04/11/2024	ND	215	107	200	0.868	
EXT DRO >C28-C36	<10.0	10.0	04/11/2024	ND					

Surrogate: 1-Chlorooctane 92.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.7 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/10/2024  
 Reported: 04/15/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/10/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 30 @ 8' (H241866-02)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.13	107	2.00	0.427		
Toluene*	<0.050	0.050	04/11/2024	ND	2.27	114	2.00	0.197		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.33	117	2.00	0.405		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	7.00	117	6.00	0.382		
Total BTEX	<0.300	0.300	04/11/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	211	105	200	0.904	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	204	102	200	5.06	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					

Surrogate: 1-Chlorooctane 92.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/10/2024  
 Reported: 04/15/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/10/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 31 @ 8' (H241866-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.13	107	2.00	0.427		
Toluene*	<0.050	0.050	04/11/2024	ND	2.27	114	2.00	0.197		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.33	117	2.00	0.405		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	7.00	117	6.00	0.382		
Total BTEX	<0.300	0.300	04/11/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	211	105	200	0.904	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	204	102	200	5.06	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.4 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/10/2024  
 Reported: 04/15/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/10/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 48 @ 7.5' (H241866-04)**

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	04/11/2024	ND	2.13	107	2.00	0.427		
Toluene*	<0.050	0.050	04/11/2024	ND	2.27	114	2.00	0.197		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.33	117	2.00	0.405		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	7.00	117	6.00	0.382		
Total BTEX	<0.300	0.300	04/11/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	211	105	200	0.904	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	204	102	200	5.06	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					

Surrogate: 1-Chlorooctane 83.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/10/2024  
 Reported: 04/15/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/10/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 50 @ 8' (H241866-05)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.13	107	2.00	0.427		
Toluene*	<0.050	0.050	04/11/2024	ND	2.27	114	2.00	0.197		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.33	117	2.00	0.405		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	7.00	117	6.00	0.382		
Total BTEX	<0.300	0.300	04/11/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	211	105	200	0.904	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	204	102	200	5.06	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					

Surrogate: 1-Chlorooctane 102 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/10/2024  
 Reported: 04/15/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/10/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 51 @ 8' (H241866-06)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2024	ND	2.11	106	2.00	1.00		
Toluene*	<0.050	0.050	04/11/2024	ND	2.29	114	2.00	5.19		
Ethylbenzene*	<0.050	0.050	04/11/2024	ND	2.37	118	2.00	7.90		
Total Xylenes*	<0.150	0.150	04/11/2024	ND	7.05	117	6.00	8.14		
Total BTEX	<0.300	0.300	04/11/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/11/2024	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/10/2024	ND	211	105	200	0.904	
DRO >C10-C28*	<10.0	10.0	04/10/2024	ND	204	102	200	5.06	
EXT DRO >C28-C36	<10.0	10.0	04/10/2024	ND					

Surrogate: 1-Chlorooctane 95.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.3 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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Notes and Definitions

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

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*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

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April 16, 2024

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: DAGGER DRAW TRUNK LINE

Enclosed are the results of analyses for samples received by the laboratory on 04/11/24 14:54.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 52 @ 6' (H241909-01)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223	
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75	
Total BTX	<0.300	0.300	04/12/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	04/12/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 81.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 53 @ 12.5' (H241909-02)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223		
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75		
Total BTEX	<0.300	0.300	04/12/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	04/12/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 84.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.3 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 54 @ 7' (H241909-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223		
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75		
Total BTEX	<0.300	0.300	04/12/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	04/12/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 80.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.5 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 55 @ 11' (H241909-04)**

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	04/12/2024	ND	2.20	110	2.00	0.223		
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75		
Total BTEX	<0.300	0.300	04/12/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/12/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 84.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.1 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 56 @ 7' (H241909-05)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223	
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75	
Total BTEX	<0.300	0.300	04/12/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/12/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 79.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.6 % 49.1-148

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**Analytical Results For:**

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 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 57 @ 6' (H241909-06)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223	
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75	
Total BTEX	<0.300	0.300	04/12/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/12/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 92.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 58 @ 6' (H241909-07)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223	
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75	
Total BTEX	<0.300	0.300	04/12/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/12/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 77.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.2 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 59 @ 2' (H241909-08)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223	
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75	
Total BTEX	<0.300	0.300	04/12/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/15/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 83.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.4 % 49.1-148

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**Analytical Results For:**

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 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 60 @ 3' (H241909-09)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223		
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75		
Total BTEx	<0.300	0.300	04/12/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/15/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 91.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 61 @ 2' (H241909-10)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223		
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75		
Total BTEX	<0.300	0.300	04/12/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/15/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 87.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 62 @ 2' (H241909-11)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223	
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86	
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34	
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75	
Total BTEX	<0.300	0.300	04/12/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	04/15/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 81.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.5 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 63 @ 6' (H241909-12)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223		
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75		
Total BTEX	<0.300	0.300	04/12/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/15/2024	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 85.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.3 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/11/2024  
 Reported: 04/16/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/11/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: FL 64 @ 8' (H241909-13)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2024	ND	2.20	110	2.00	0.223		
Toluene*	<0.050	0.050	04/12/2024	ND	2.31	115	2.00	4.86		
Ethylbenzene*	<0.050	0.050	04/12/2024	ND	2.38	119	2.00	5.34		
Total Xylenes*	<0.150	0.150	04/12/2024	ND	7.13	119	6.00	5.75		
Total BTEX	<0.300	0.300	04/12/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CT						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	04/15/2024	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/12/2024	ND	182	91.0	200	0.376	
DRO >C10-C28*	<10.0	10.0	04/12/2024	ND	174	87.1	200	4.60	
EXT DRO >C28-C36	<10.0	10.0	04/12/2024	ND					

Surrogate: 1-Chlorooctane 85.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.9 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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---

### Notes and Definitions

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

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

---

Celey D. Keene, Lab Director/Quality Manager

**ARDINAL LABORATORIES**

**101 East Marland, Hobbs, NM 88240**

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.						BILL TO								ANALYSIS REQUEST																											
Project Manager: Lance Crenshaw						P.O. #:						Chloride TPH (8015M) BTEX (8021B)																													
Address: 2617 West Marland						Company Mewbourne																																			
City: Hobbs State: NM Zip: 88240						Attn: Connor Walker																																			
Phone #: (575) 264-9884 Fax #:						Address:																																			
Project #: 20174 Project Owner: Mewbourne						City:																																			
Project Name: Dagger Draw Trunk Line						State: NM Zip:																																			
Project Location: 32.580475, -104.470077						Phone #:																																			
Sampler Name: Aaron Rios						Fax #:																																			
FOR LAB USE ONLY						MATRIX						PRESERV.		SAMPLING																											
Sample I.D.						(G/RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME											
H241909 Lab I.D.						C 1				X												X				4/11/24				X X X											
FL 52 @ 6'						C 1				X												X				4/11/24				X X X											
FL 53 @ 12.5'						C 1				X												X				4/11/24				X X X											
FL 54 @ 7'						C 1				X												X				4/11/24				X X X											
FL 55 @ 11'						C 1				X												X				4/11/24				X X X											
FL 56 @ 7'						C 1				X												X				4/11/24				X X X											
FL 57 @ 6'						C 1				X												X				4/11/24				X X X											
FL 58 @ 6'						C 1				X												X				4/11/24				X X X											
FL 59 @ 2'						C 1				X												X				4/11/24				X X X											
FL 60 @ 3'						C 1				X												X				4/11/24				X X X											
FL 61 @ 2'						C 1				X												X				4/11/24				X X X											
<p>PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>																																									
Relinquished By: [Signature]						Date: 4-11-24		Received By: [Signature]						Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:																											
						Time: 1454								Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #:																											
Relinquished By:						Date:		Received By:						REMARKS:																											
						Time:																																			
Delivered By: (Circle One) -11.0=						Sample Condition: Cool Intact						CHECKED BY: [Signature] (Initials)						Please email results and copy of CoC to pm@etechenv.com.																							
Sampler - UPS - Bus - Other: #140						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																													



# **CARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

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

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page 17 of 47

<b>Company Name:</b> Etech Environmental & Safety Solutions, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>													
<b>Project Manager:</b> Lance Crenshaw				<b>P.O. #:</b>				<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>													
<b>Address:</b> 2617 West Marland				<b>Company:</b> Mewbourne																	
<b>City:</b> Hobbs		<b>State:</b> NM		<b>Zip:</b> 88240		<b>Attn:</b> Connor Walker															
<b>Phone #:</b> (575) 264-9884		<b>Fax #:</b>		<b>Address:</b>																	
<b>Project #:</b> 20174		<b>Project Owner:</b> Mewbourne		<b>City:</b>																	
<b>Project Name:</b> Dagger Draw Trunk Line				<b>State:</b> NM <b>Zip:</b>																	
<b>Project Location:</b> 32.580475, -104.470077				<b>Phone #:</b>																	
<b>Sampler Name:</b> Aaron Rios				<b>Fax #:</b>																	

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													
11	FL 62 @ 2'	C	1			X					X		4/11/24		X	X	X										
12	FL 63 @ 6'	C	1			X					X		4/11/24		X	X	X										
13	FL 64 @ 8'	C	1			X					X		4/11/24		X	X	X										

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<b>Relinquished By:</b>  <b>Relinquished By:</b>	<b>Date:</b> 4-11-24 <b>Time:</b> 1454	<b>Received By:</b>  <b>Received By:</b>	<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>REMARKS:</b>
<b>Delivered By: (Circle One)</b> Sampler - UPS - Bus - Other:			<b>CHECKED BY:</b> (Initials) 

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

FORM-006  
Revision 1.0

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



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

---

April 22, 2024

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: DAGGER DRAW TRUNK LINE

Enclosed are the results of analyses for samples received by the laboratory on 04/16/24 14:55.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/16/2024  
 Reported: 04/22/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 18 @ 3.5' (H242016-01)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/18/2024	ND	2.07	103	2.00	0.321	
Toluene*	<0.050	0.050	04/18/2024	ND	2.07	104	2.00	0.334	
Ethylbenzene*	<0.050	0.050	04/18/2024	ND	2.01	100	2.00	0.230	
Total Xylenes*	<0.150	0.150	04/18/2024	ND	6.15	102	6.00	0.347	
Total BTX	<0.300	0.300	04/18/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	04/18/2024	ND	480	120	400	3.39		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/17/2024	ND	190	95.0	200	3.21	
DRO >C10-C28*	<10.0	10.0	04/17/2024	ND	207	104	200	2.81	
EXT DRO >C28-C36	<10.0	10.0	04/17/2024	ND					

Surrogate: 1-Chlorooctane 96.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/16/2024  
 Reported: 04/22/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NEW 1 (H242016-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/18/2024	ND	2.07	103	2.00	0.321	
Toluene*	<0.050	0.050	04/18/2024	ND	2.07	104	2.00	0.334	
Ethylbenzene*	<0.050	0.050	04/18/2024	ND	2.01	100	2.00	0.230	
Total Xylenes*	<0.150	0.150	04/18/2024	ND	6.15	102	6.00	0.347	
Total BTEX	<0.300	0.300	04/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	04/18/2024	ND	480	120	400	3.39	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/17/2024	ND	190	95.0	200	3.21	
DRO >C10-C28*	<10.0	10.0	04/17/2024	ND	207	104	200	2.81	
EXT DRO >C28-C36	<10.0	10.0	04/17/2024	ND					

Surrogate: 1-Chlorooctane 91.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.6 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/16/2024  
 Reported: 04/22/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NEW 2 (H242016-03)**

BTEx 8021B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/18/2024	ND	2.07	103	2.00	0.321	
Toluene*	<0.050	0.050	04/18/2024	ND	2.07	104	2.00	0.334	
Ethylbenzene*	<0.050	0.050	04/18/2024	ND	2.01	100	2.00	0.230	
Total Xylenes*	<0.150	0.150	04/18/2024	ND	6.15	102	6.00	0.347	
Total BTEX	<0.300	0.300	04/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/18/2024	ND	480	120	400	3.39	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/17/2024	ND	190	95.0	200	3.21	
DRO >C10-C28*	<10.0	10.0	04/17/2024	ND	207	104	200	2.81	
EXT DRO >C28-C36	<10.0	10.0	04/17/2024	ND					

Surrogate: 1-Chlorooctane 88.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.9 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/16/2024  
 Reported: 04/22/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NEW 3 (H242016-04)**

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	04/18/2024	ND	2.07	103	2.00	0.321	
Toluene*	<0.050	0.050	04/18/2024	ND	2.07	104	2.00	0.334	
Ethylbenzene*	<0.050	0.050	04/18/2024	ND	2.01	100	2.00	0.230	
Total Xylenes*	<0.150	0.150	04/18/2024	ND	6.15	102	6.00	0.347	
Total BTEX	<0.300	0.300	04/18/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/18/2024	ND	480	120	400	3.39		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/17/2024	ND	203	102	200	0.306	
DRO >C10-C28*	<10.0	10.0	04/17/2024	ND	211	106	200	3.29	
EXT DRO >C28-C36	<10.0	10.0	04/17/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/16/2024  
 Reported: 04/22/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SEW 1 (H242016-05)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/18/2024	ND	2.07	103	2.00	0.321	
Toluene*	<0.050	0.050	04/18/2024	ND	2.07	104	2.00	0.334	
Ethylbenzene*	<0.050	0.050	04/18/2024	ND	2.01	100	2.00	0.230	
Total Xylenes*	<0.150	0.150	04/18/2024	ND	6.15	102	6.00	0.347	
Total BTEX	<0.300	0.300	04/18/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	04/18/2024	ND	480	120	400	3.39		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/17/2024	ND	203	102	200	0.306	
DRO >C10-C28*	<10.0	10.0	04/17/2024	ND	211	106	200	3.29	
EXT DRO >C28-C36	<10.0	10.0	04/17/2024	ND					

Surrogate: 1-Chlorooctane 89.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.1 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/16/2024  
 Reported: 04/22/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SEW 2 (H242016-06)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/18/2024	ND	2.07	103	2.00	0.321	
Toluene*	<0.050	0.050	04/18/2024	ND	2.07	104	2.00	0.334	
Ethylbenzene*	<0.050	0.050	04/18/2024	ND	2.01	100	2.00	0.230	
Total Xylenes*	<0.150	0.150	04/18/2024	ND	6.15	102	6.00	0.347	
Total BTEX	<0.300	0.300	04/18/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	04/18/2024	ND	480	120	400	3.39	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/17/2024	ND	203	102	200	0.306	
DRO >C10-C28*	<10.0	10.0	04/17/2024	ND	211	106	200	3.29	
EXT DRO >C28-C36	<10.0	10.0	04/17/2024	ND					

Surrogate: 1-Chlorooctane 93.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/16/2024  
 Reported: 04/22/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SWW 3 (H242016-07)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/18/2024	ND	2.07	103	2.00	0.321	
Toluene*	<0.050	0.050	04/18/2024	ND	2.07	104	2.00	0.334	
Ethylbenzene*	<0.050	0.050	04/18/2024	ND	2.01	100	2.00	0.230	
Total Xylenes*	<0.150	0.150	04/18/2024	ND	6.15	102	6.00	0.347	
Total BTEX	<0.300	0.300	04/18/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/18/2024	ND	480	120	400	3.39		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/17/2024	ND	203	102	200	0.306	
DRO >C10-C28*	<10.0	10.0	04/17/2024	ND	211	106	200	3.29	
EXT DRO >C28-C36	<10.0	10.0	04/17/2024	ND					

Surrogate: 1-Chlorooctane 99.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/16/2024  
 Reported: 04/22/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/16/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NW 6 (H242016-08)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/18/2024	ND	2.07	103	2.00	0.321	
Toluene*	<0.050	0.050	04/18/2024	ND	2.07	104	2.00	0.334	
Ethylbenzene*	<0.050	0.050	04/18/2024	ND	2.01	100	2.00	0.230	
Total Xylenes*	<0.150	0.150	04/18/2024	ND	6.15	102	6.00	0.347	
Total BTEX	<0.300	0.300	04/18/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/18/2024	ND	480	120	400	3.39	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/17/2024	ND	203	102	200	0.306	
DRO >C10-C28*	<10.0	10.0	04/17/2024	ND	211	106	200	3.29	
EXT DRO >C28-C36	<10.0	10.0	04/17/2024	ND					

Surrogate: 1-Chlorooctane 90.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

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

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

Celey D. Keene, Lab Director/Quality Manager



## CARDINAL LABORATORIES

**101 East Marland, Hobbs, NM 88240**

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 11 of 11

[illegible]





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

May 03, 2024

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: DAGGER DRAW TRUNK LINE

Enclosed are the results of analyses for samples received by the laboratory on 04/29/24 14:42.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 8' (H242273-01)**

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	05/01/2024	ND	1.92	95.8	2.00	1.03	
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53	
Total BTX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	22400	16.0	05/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	190	94.8	200	2.09	
DRO >C10-C28*	12.7	10.0	05/01/2024	ND	198	99.0	200	1.84	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 99.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.0 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 10' (H242273-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03	
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	15600	16.0	05/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 90.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.7 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 12' (H242273-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03		
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53		
Total BTEX	<0.300	0.300	05/01/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16000	16.0	05/01/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 14' (H242273-04)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03		
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53		
Total BTEx	<0.300	0.300	05/01/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7330	16.0	05/02/2024	ND	416	104	400	3.77	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 107 % 48.2-134

Surrogate: 1-Chlorooctadecane 98.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 16' (H242273-05)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03		
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53		
Total BTEx	<0.300	0.300	05/01/2024	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6000	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 18' (H242273-06)**

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	05/01/2024	ND	1.92	95.8	2.00	1.03	
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53	
Total BTX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6080	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 99.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 20' (H242273-07)**

BTEx 8021B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03	
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8400	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 94.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 22' (H242273-08)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03		
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53		
Total BTEX	<0.300	0.300	05/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8930	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 94.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 24' (H242273-09)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03	
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9060	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 89.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 26' (H242273-10)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03		
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53		
Total BTEX	<0.300	0.300	05/01/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3360	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 76.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 68.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 1 @ 28' (H242273-11)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03		
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53		
Total BTEX	<0.300	0.300	05/01/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 83.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 2 @ 8' (H242273-12)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	1.92	95.8	2.00	1.03	
Toluene*	<0.050	0.050	05/01/2024	ND	1.96	98.0	2.00	0.758	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	1.98	99.2	2.00	0.966	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	5.82	97.0	6.00	1.53	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9330	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	30.6	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 94.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 2 @ 10' (H242273-13)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8660	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 96.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 2 @ 12' (H242273-14)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10800	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 112 % 48.2-134

Surrogate: 1-Chlorooctadecane 100 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 2 @ 14' (H242273-15)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 127 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7600	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 91.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 2 @ 16' (H242273-16)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEx	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10900	16.0	05/02/2024	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	04/30/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	04/30/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	04/30/2024	ND					

Surrogate: 1-Chlorooctane 95.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 2 @ 18' (H242273-17)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 126 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11100	16.0	05/02/2024	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	05/01/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 94.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 84.3 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 2 @ 20' (H242273-18)**

BTEx 8021B			mg/kg		Analyzed By: JH				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2640	16.0	05/02/2024	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	05/01/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 94.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.1 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 2 @ 22' (H242273-19)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	05/02/2024	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	05/01/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 96.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.0 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 3 @ 8' (H242273-20)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750		
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26		
Total BTEX	<0.300	0.300	05/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 129 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	928	16.0	05/02/2024	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	05/01/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 3 @ 10' (H242273-21)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750		
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26		
Total BTEx	<0.300	0.300	05/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 126 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1580	16.0	05/02/2024	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	05/01/2024	ND	199	99.5	200	1.34	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	188	93.8	200	1.80	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 80.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 71.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 3 @ 12' (H242273-22)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 129 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7460	16.0	05/02/2024	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	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 91.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 3 @ 14' (H242273-23)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	05/02/2024	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	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 88.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 80.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT 3 @ 16' (H242273-24)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	05/01/2024	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 90.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





---

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---

### Notes and Definitions

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

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

---

Caley D. Keene, Lab Director/Quality Manager


**CARDINAL LABORATORIES**

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**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page 1 of 3

<b>Company Name:</b> Etech Environmental & Safety Solutions, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																							
<b>Project Manager:</b> Lance Crenshaw				<b>P.O. #:</b>				<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Chloride</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (8015M)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX (8021B)</div> </div>																							
<b>Address:</b> 2617 West Marland				<b>Company:</b> Mewbourne																											
<b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88240				<b>Attn:</b> Connor Walker																											
<b>Phone #:</b> (575) 264-9884 <b>Fax #:</b>				<b>Address:</b>																											
<b>Project #:</b> 20174 <b>Project Owner:</b> Mewbourne				<b>City:</b>																											
<b>Project Name:</b> Dagger Draw Trunk Line				<b>State:</b> NM <b>Zip:</b>																											
<b>Project Location:</b> 32.580475, -104.470077				<b>Phone #:</b>																											
<b>Sampler Name:</b> Aaron Rios				<b>Fax #:</b>																											
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																					
Lab I.D.	Sample I.D.			(GRAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME															
H242273				G	1			X				X	✓		4/24/24		X	X	X												
1	TT 1 @ 8'			G	1			X				X			4/24/24		X	X	X												
2	TT 1 @ 10'			G	1			X				X			4/24/24		X	X	X												
3	TT 1 @ 12'			G	1			X				X			4/24/24		X	X	X												
4	TT 1 @ 14'			G	1			X				X			4/24/24		X	X	X												
5	TT 1 @ 16'			G	1			X				X			4/24/24		X	X	X												
6	TT 1 @ 18'			G	1			X				X			4/24/24		X	X	X												
7	TT 1 @ 20'			G	1			X				X			4/24/24		X	X	X												
8	TT 1 @ 22'			G	1			X				X			4/24/24		X	X	X												
9	TT 1 @ 24'			G	1			X				X			4/24/24		X	X	X												
10	TT 1 @ 26'			G	1			X				X			4/24/24		X	X	X												
<small>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.</small>																															
<b>Relinquished By:</b>				<b>Date:</b> 4-29-24		<b>Received By:</b>				<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Add'l Phone #:</b>																			
				<b>Time:</b> 1442						<b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Add'l Fax #:</b>																			
<b>Relinquished By:</b>				<b>Date:</b>		<b>Received By:</b>				<b>REMARKS:</b>  Please email results and copy of CoC to pm@etechenv.com.																					
				<b>Time:</b>																											
<b>Delivered By: (Circle One)</b>				<b>#140</b>		<b>Sample Condition</b> Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No				<b>CHECKED BY:</b> (Initials) 																					
<b>Sampler - UPS - Bus - Other:</b> -9.6c																															

 FORM-006  
Revision 1.0

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


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**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page 2 of 3

<b>Company Name:</b> Etech Environmental & Safety Solutions, Inc. <b>Project Manager:</b> Lance Crenshaw <b>Address:</b> 2617 West Marland <b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88240 <b>Phone #:</b> (575) 264-9884 <b>Fax #:</b> <b>Project #:</b> 20174 <b>Project Owner:</b> Mewbourne <b>Project Name:</b> Dagger Draw Trunk Line <b>Project Location:</b> 32.580475, -104.470077 <b>Sampler Name:</b> Aaron Rios										<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																	
										<b>P.O. #:</b> <b>Company:</b> Mewbourne <b>Attn:</b> Connor Walker <b>Address:</b> <b>City:</b> <b>State:</b> NM <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>				<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Chloride</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (8015M)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX (8021B)</div> </div>																	
<small>FOR LAB USE ONLY</small>										<small>MATRIX</small>				<small>PRESERV</small>		<small>SAMPLING</small>															
<b>Lab I.D.</b> H3420373		<b>Sample I.D.</b>				<small>(GRAB OR (C)OMP.</small> <small># CONTAINERS</small>		<small>GROUNDWATER</small> <small>WASTEWATER</small> <small>SOIL</small> <small>OIL</small> <small>SLUDGE</small> <small>OTHER :</small>		<small>ACID/BASE:</small> <small>ICE / COOL</small> <small>OTHER :</small>		<small>DATE</small>		<small>TIME</small>																	
11		TT 1 @ 28'				G 1		X		X		4/24/24				X		X		X											
12		TT 2 @ 8'				G 1		X		X		4/24/24				X		X		X											
13		TT 2 @ 10'				G 1		X		X		4/24/24				X		X		X											
14		TT 2 @ 12'				G 1		X		X		4/24/24				X		X		X											
15		TT 2 @ 14'				G 1		X		X		4/24/24				X		X		X											
16		TT 2 @ 16'				G 1		X		X		4/24/24				X		X		X											
17		TT 2 @ 18'				G 1		X		X		4/24/24				X		X		X											
18		TT 2 @ 20'				G 1		X		X		4/24/24				X		X		X											
19		TT 2 @ 22'				G 1		X		X		4/24/24				X		X		X											
20		TT 3 @ 8'				G 1		X		X		4/24/24				X		X		X											
<small>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.</small>																															
<b>Relinquished By:</b> <i>[Signature]</i> <b>Date:</b> 4-29-24 <b>Time:</b> 1442										<b>Received By:</b> <i>[Signature]</i> <b>Date:</b> <b>Time:</b>										<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b> <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b> <b>REMARKS:</b>											
<b>Relinquished By:</b> <b>Date:</b> <b>Time:</b>										<b>Received By:</b> <b>Date:</b> <b>Time:</b>										Please email results and copy of CoC to pm@etechenv.com.											
<b>Delivered By: (Circle One)</b> <b>Sampler - UPS - Bus - Other:</b>										<b>Sample Condition</b> Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										<b>CHECKED BY:</b> (Initials) <i>[Signature]</i>											

 FORM-006  
 Revision 1.0

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




**CARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

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

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page 3 of 3

<b>Company Name:</b> Etech Environmental & Safety Solutions, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>											
<b>Project Manager:</b> Lance Crenshaw				<b>P.O. #:</b>				<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Chloride</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (8015M)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX (8021B)</div> </div>											
<b>Address:</b> 2617 West Marland				<b>Company:</b> Mewbourne															
<b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88240				<b>Attn:</b> Connor Walker															
<b>Phone #:</b> (575) 264-9884 <b>Fax #:</b>				<b>Address:</b>															
<b>Project #:</b> 20174 <b>Project Owner:</b> Mewbourne				<b>City:</b>															
<b>Project Name:</b> Dagger Draw Trunk Line				<b>State:</b> NM <b>Zip:</b>															
<b>Project Location:</b> 32.580475, -104.470077				<b>Phone #:</b>															
<b>Sampler Name:</b> Aaron Rios				<b>Fax #:</b>															

FOR LAB USE ONLY		GRAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		SAMPLING		DATE	TIME
Lab I.D.	Sample I.D.			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :			
H242273															
21	TT 3 @ 10'	G	1		X				X				4/24/24		
22	TT 3 @ 12'	G	1		X				X				4/24/24		
23	TT 3 @ 14'	G	1		X				X				4/24/24		
24	TT 3 @ 16'	G	1		X				X				4/24/24		

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<b>Relinquished By:</b> 	<b>Date:</b> 4-29-24 <b>Time:</b> 1442	<b>Received By:</b> 	<b>Date:</b> <b>Time:</b>	<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b> <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b>	<b>REMARKS:</b>  Please email results and copy of CoC to pm@etechenv.com.
<b>Relinquished By:</b> 	<b>Date:</b> <b>Time:</b>	<b>Received By:</b> 	<b>Date:</b> <b>Time:</b>	<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b> <b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b>	<b>REMARKS:</b>  Please email results and copy of CoC to pm@etechenv.com.

<b>Delivered By: (Circle One)</b> Sampler - UPS - Bus - Other:	#140 - 9.6c	<b>Sample Condition</b> Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>CHECKED BY:</b> (Initials) T.O.
---	----------------	---	--



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

May 03, 2024

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: DAGGER DRAW TRUNK LINE

Enclosed are the results of analyses for samples received by the laboratory on 04/29/24 14:42.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 65 @ 6' (H242274-01)**

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	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	05/02/2024	ND	464	116	400	7.14		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 87.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.9 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 66 @ 6' (H242274-02)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	05/02/2024	ND	464	116	400	7.14	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 85.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.1 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 67 @ 8' (H242274-03)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	05/02/2024	ND	464	116	400	7.14	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.1 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 68 @ 8' (H242274-04)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750		
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26		
Total BTEX	<0.300	0.300	05/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	05/02/2024	ND	464	116	400	7.14	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 78.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 68.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 69 @ 8' (H242274-05)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1150	16.0	05/02/2024	ND	464	116	400	7.14	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 83.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.8 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 70 @ 8' (H242274-06)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.070</b>	0.050	05/01/2024	ND	2.12	106	2.00	0.750	
<b>Toluene*</b>	<b>1.76</b>	0.050	05/01/2024	ND	2.14	107	2.00	1.22	
<b>Ethylbenzene*</b>	<b>0.726</b>	0.050	05/01/2024	ND	2.35	118	2.00	0.0969	
<b>Total Xylenes*</b>	<b>5.71</b>	0.150	05/01/2024	ND	7.14	119	6.00	1.26	
<b>Total BTEX</b>	<b>8.27</b>	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1070</b>	16.0	05/02/2024	ND	464	116	400	7.14	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>47.3</b>	10.0	05/01/2024	ND	196	98.0	200	2.92	
<b>DRO &gt;C10-C28*</b>	<b>11.3</b>	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 93.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.9 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 71 @ 8' (H242274-07)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750		
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26		
Total BTEX	<0.300	0.300	05/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 118 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1040	16.0	05/02/2024	ND	464	116	400	7.14		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 92.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 72 @ 8' (H242274-08)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	2.12	106	2.00	0.750		
Toluene*	<0.050	0.050	05/01/2024	ND	2.14	107	2.00	1.22		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.35	118	2.00	0.0969		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	7.14	119	6.00	1.26		
Total BTEX	<0.300	0.300	05/01/2024	ND						

Surrogate: 4-Bromofluorobenzene (PID) 122 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4200	16.0	05/02/2024	ND	464	116	400	7.14	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 91.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 73 @ 8' (H242274-09)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30		
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91		
Total BTEX	<0.300	0.300	05/01/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3800	16.0	05/02/2024	ND	464	116	400	7.14		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 94.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 74 @ 8' (H242274-10)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1040	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 89.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 75 @ 8' (H242274-11)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7840	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 89.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.9 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 76 @ 8' (H242274-12)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30		
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91		
Total BTEX	<0.300	0.300	05/01/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	880	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 81.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.3 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 77 @ 8' (H242274-13)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3240	16.0	05/02/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 85.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.4 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 78 @ 8' (H242274-14)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30		
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57		
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91		
Total BTEX	<0.300	0.300	05/01/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10400	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 87.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.5 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 79 @ 8' (H242274-15)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	21400	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 86.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.8 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 80 @ 8' (H242274-16)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	23000	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 83.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.5 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 81 @ 8' (H242274-17)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4640	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	196	98.0	200	2.92	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	187	93.5	200	4.55	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 77.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 68.2 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 82 @ 8' (H242274-18)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30		
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57		
Ethylbenzene*	0.059	0.050	05/01/2024	ND	2.09	105	2.00	4.91		
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91		
Total BTEX	<0.300	0.300	05/01/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	18400	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	154	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	25.8	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 93.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.6 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 83 @ 8' (H242274-19)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8000	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 96.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.8 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 84 @ 8' (H242274-20)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9000	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	33.5	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 97.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.7 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 85 @ 8' (H242274-21)**

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	12000	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 81.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.5 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 86 @ 8' (H242274-22)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16400	16.0	05/02/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 91.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.6 % 49.1-148

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 87 @ 8' (H242274-23)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8800	16.0	05/02/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 96.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.7 % 49.1-148

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 88 @ 8' (H242274-24)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	25200	16.0	05/02/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 94.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 89 @ 8' (H242274-25)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/01/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/01/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/01/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/01/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/01/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12000	16.0	05/02/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 97.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 90 @ 8' (H242274-26)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/02/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/02/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/02/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/02/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/02/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	12400	16.0	05/02/2024	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 97.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 91 @ 8' (H242274-27)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/02/2024	ND	2.06	103	2.00	5.30	
Toluene*	<0.050	0.050	05/02/2024	ND	2.07	103	2.00	4.57	
Ethylbenzene*	<0.050	0.050	05/02/2024	ND	2.09	105	2.00	4.91	
Total Xylenes*	<0.150	0.150	05/02/2024	ND	6.10	102	6.00	4.91	
Total BTEX	<0.300	0.300	05/02/2024	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7100	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 85.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
 LANCE CRENSHAW  
 2617 W MARLAND  
 HOBBS NM, 88240  
 Fax To:

Received: 04/29/2024  
 Reported: 05/03/2024  
 Project Name: DAGGER DRAW TRUNK LINE  
 Project Number: 20174  
 Project Location: MEWBOURNE 32.580475,-104.470077

Sampling Date: 04/24/2024  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL 92 @ 8' (H242274-28)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/02/2024	ND	2.06	103	2.00	5.30		
Toluene*	<0.050	0.050	05/02/2024	ND	2.07	103	2.00	4.57		
Ethylbenzene*	<0.050	0.050	05/02/2024	ND	2.09	105	2.00	4.91		
Total Xylenes*	<0.150	0.150	05/02/2024	ND	6.10	102	6.00	4.91		
Total BTEX	<0.300	0.300	05/02/2024	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6480	16.0	05/02/2024	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/01/2024	ND	197	98.5	200	1.82	
DRO >C10-C28*	<10.0	10.0	05/01/2024	ND	199	99.7	200	1.60	
EXT DRO >C28-C36	<10.0	10.0	05/01/2024	ND					

Surrogate: 1-Chlorooctane 84.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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*Celey D. Keene*

Celey D. Keene, Lab Director/Quality Manager



# **CARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

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

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page 1 of 3

<b>Company Name:</b> Etech Environmental & Safety Solutions, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																
<b>Project Manager:</b> Lance Crenshaw				<b>P.O. #:</b>				<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>																
<b>Address:</b> 2617 West Marland				<b>Company:</b> Mewbourne																				
<b>City:</b> Hobbs <b>State:</b> NM <b>Zip:</b> 88240				<b>Attn:</b> Connor Walker																				
<b>Phone #:</b> (575) 264-9884 <b>Fax #:</b>				<b>Address:</b>																				
<b>Project #:</b> 20174 <b>Project Owner:</b> Mewbourne				<b>City:</b>																				
<b>Project Name:</b> Dagger Draw Trunk Line				<b>State:</b> NM <b>Zip:</b>																				
<b>Project Location:</b> 32.580475, -104.470077				<b>Phone #:</b>																				
<b>Sampler Name:</b> Aaron Rios				<b>Fax #:</b>																				
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING														
Lab I.D.	Sample I.D.	(GRAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME										
H242274																								
1	FL 65 @ 6'	C	1			X					X		4/24/24		X	X	X							
2	FL 66 @ 6'	C	1			X					X		4/24/24		X	X	X							
3	FL 67 @ 8'	C	1			X					X		4/24/24		X	X	X							
4	FL 68 @ 8'	C	1			X					X		4/24/24		X	X	X							
5	FL 69 @ 8'	C	1			X					X		4/24/24		X	X	X							
6	FL 70 @ 8'	C	1			X					X		4/24/24		X	X	X							
7	FL 71 @ 8'	C	1			X					X		4/24/24		X	X	X							
8	FL 72 @ 8'	C	1			X					X		4/24/24		X	X	X							
9	FL 73 @ 8'	C	1			X					X		4/24/24		X	X	X							
10	FL 74 @ 8'	C	1			X					X		4/24/24		X	X	X							
<small>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.</small>																								
<b>Relinquished By:</b> <i>[Signature]</i>		<b>Date:</b> 4-29-24 <b>Time:</b> 1442		<b>Received By:</b> <i>[Signature]</i>		<b>Date:</b> <i>[Signature]</i>		<b>Time:</b>		<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b>		<b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b>		<b>REMARKS:</b>										
<b>Relinquished By:</b>		<b>Date:</b>		<b>Received By:</b>		<b>Date:</b>		<b>Time:</b>		<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Phone #:</b>		<b>Fax Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Add'l Fax #:</b>		<b>REMARKS:</b>										
<b>Delivered By: (Circle One)</b>		<b>Sample Condition</b>		<b>CHECKED BY:</b> (Initials)		<b>Delivered By:</b> (Circle One)		<b>Sample Condition</b>		<b>CHECKED BY:</b> (Initials)		<b>Delivered By:</b> (Circle One)		<b>Sample Condition</b>		<b>CHECKED BY:</b> (Initials)								
<b>Sampler - UPS - Bus - Other:</b>		<b>Sample Condition</b>		<b>CHECKED BY:</b> (Initials)		<b>Sampler - UPS - Bus - Other:</b>		<b>Sample Condition</b>		<b>CHECKED BY:</b> (Initials)		<b>Sampler - UPS - Bus - Other:</b>		<b>Sample Condition</b>		<b>CHECKED BY:</b> (Initials)								

FORM-006  
Revision 1.0

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





# **CARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

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

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page 2 of 3

<b>Company Name:</b> Etech Environmental & Safety Solutions, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																																																																																																																																																																																						
<b>Project Manager:</b> Lance Crenshaw				<b>P.O. #:</b>				<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>																																																																																																																																																																																						
<b>Address:</b> 2617 West Marland				<b>Company:</b> Mewbourne																																																																																																																																																																																										
<b>City:</b> Hobbs		<b>State:</b> NM		<b>Zip:</b> 88240		<b>Attn:</b> Connor Walker																																																																																																																																																																																								
<b>Phone #:</b> (575) 264-9884		<b>Fax #:</b>		<b>Address:</b>																																																																																																																																																																																										
<b>Project #:</b> 20174		<b>Project Owner:</b> Mewbourne		<b>City:</b>																																																																																																																																																																																										
<b>Project Name:</b> Dagger Draw Trunk Line				<b>State:</b> NM <b>Zip:</b>																																																																																																																																																																																										
<b>Project Location:</b> 32.580475, -104.470077				<b>Phone #:</b>																																																																																																																																																																																										
<b>Sampler Name:</b> Aaron Rios				<b>Fax #:</b>																																																																																																																																																																																										
<div style="display: flex;"> <div style="flex: 1;"> <b>FOR LAB USE ONLY</b> </div> <div style="flex: 2;"> <table border="1"> <thead> <tr> <th rowspan="2">Lab I.D.</th> <th rowspan="2">Sample I.D.</th> <th rowspan="2">(GRAB OR C)OMP.</th> <th rowspan="2"># CONTAINERS</th> <th colspan="6">MATRIX</th> <th colspan="2">PRESERV.</th> <th colspan="2">SAMPLING</th> </tr> <tr> <th>GROUNDWATER</th> <th>WASTEWATER</th> <th>SOIL</th> <th>OIL</th> <th>SLUDGE</th> <th>OTHER :</th> <th>ACID/BASE:</th> <th>ICE / COOL</th> <th>OTHER :</th> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>H242274</td> <td>FL 75 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> <tr> <td>12</td> <td>FL 76 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> <tr> <td>13</td> <td>FL 77 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> <tr> <td>14</td> <td>FL 78 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> <tr> <td>15</td> <td>FL 79 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> <tr> <td>16</td> <td>FL 80 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> <tr> <td>17</td> <td>FL 81 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> <tr> <td>18</td> <td>FL 82 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> <tr> <td>19</td> <td>FL 83 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> <tr> <td>20</td> <td>FL 84 @ 8'</td> <td>C</td> <td>1</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td>4/24/24</td> <td></td> </tr> </tbody> </table> </div> </div>																Lab I.D.	Sample I.D.	(GRAB OR C)OMP.	# CONTAINERS	MATRIX						PRESERV.		SAMPLING		GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	H242274	FL 75 @ 8'	C	1			X					X		4/24/24		12	FL 76 @ 8'	C	1			X					X		4/24/24		13	FL 77 @ 8'	C	1			X					X		4/24/24		14	FL 78 @ 8'	C	1			X					X		4/24/24		15	FL 79 @ 8'	C	1			X					X		4/24/24		16	FL 80 @ 8'	C	1			X					X		4/24/24		17	FL 81 @ 8'	C	1			X					X		4/24/24		18	FL 82 @ 8'	C	1			X					X		4/24/24		19	FL 83 @ 8'	C	1			X					X		4/24/24		20	FL 84 @ 8'	C	1			X					X		4/24/24	
Lab I.D.	Sample I.D.	(GRAB OR C)OMP.	# CONTAINERS	MATRIX						PRESERV.		SAMPLING																																																																																																																																																																																		
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16	FL 80 @ 8'	C	1			X					X		4/24/24																																																																																																																																																																																	
17	FL 81 @ 8'	C	1			X					X		4/24/24																																																																																																																																																																																	
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<small>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.</small>																																																																																																																																																																																														
<b>Relinquished By:</b> <i>[Signature]</i>				<b>Date:</b> 4-29-24		<b>Received By:</b> <i>[Signature]</i>				<b>Phone Result:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Add'l Phone #:</b>																																																																																																																																																																																		
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<b>Delivered By: (Circle One)</b> Sampler - UPS - Bus - Other:				<b>Date:</b> 4-29-24 <b>Time:</b> 1442		<b>Sample Condition</b> Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				<b>CHECKED BY:</b> (Initials) <i>SO</i>		<b>REMARKS:</b>  Please email results and copy of CoC to pm@etechenv.com.																																																																																																																																																																																		

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# **CARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

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

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Page 3 of 3

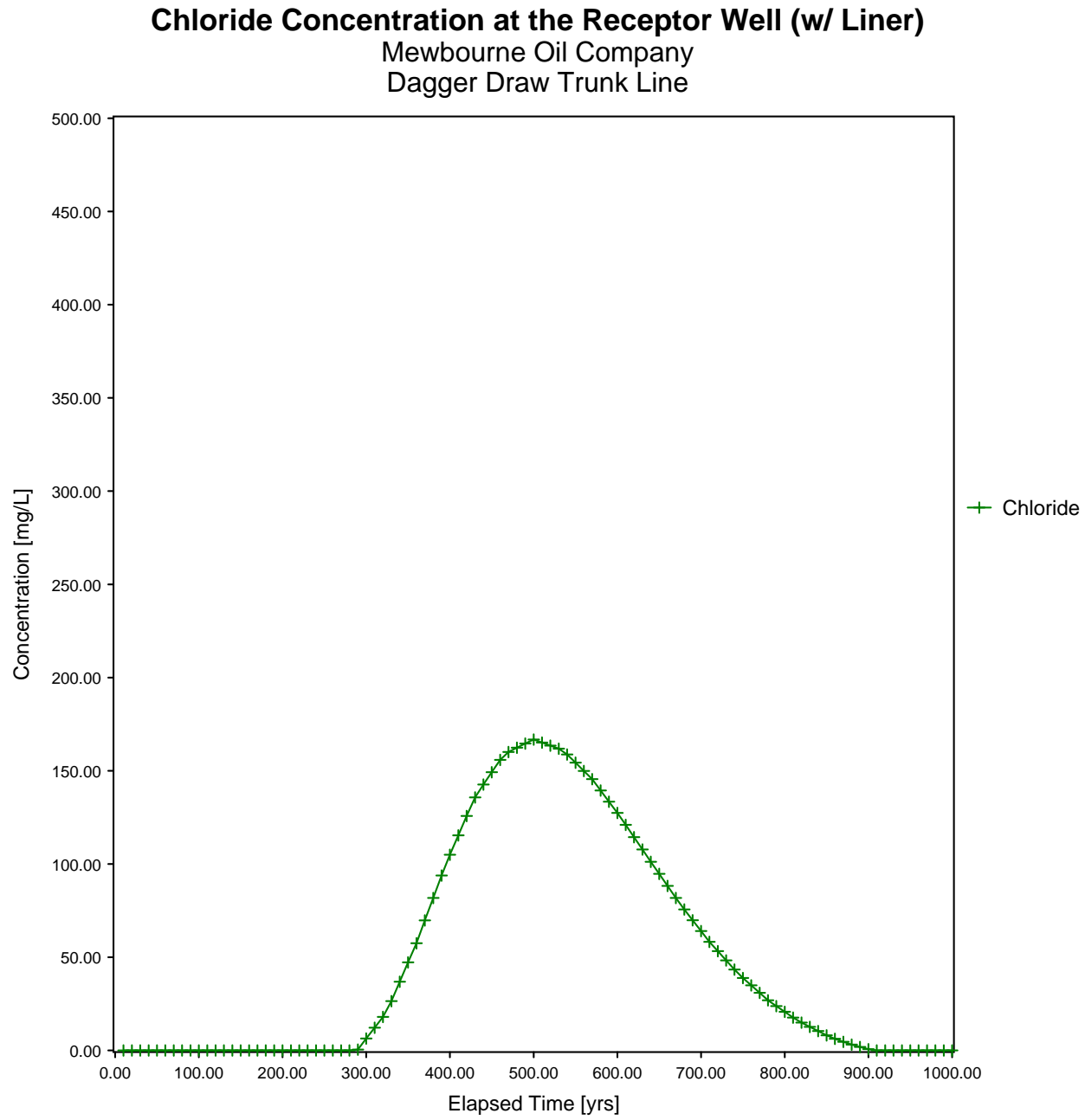
Company Name: Etech Environmental & Safety Solutions, Inc.				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: Lance Crenshaw				P.O. #:				<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>																			
Address: 2617 West Marland				Company: Mewbourne																							
City: Hobbs State: NM Zip: 88240				Attn: Connor Walker																							
Phone #: (575) 264-9884 Fax #:				Address:																							
Project #: 20174 Project Owner: Mewbourne				City:																							
Project Name: Dagger Draw Trunk Line				State: NM Zip:																							
Project Location: 32.580475, -104.470077				Phone #:																							
Sampler Name: Aaron Rios				Fax #:																							
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																	
Lab I.D.	Sample I.D.	(GRAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME													
4242274																											
21	FL 85 @ 8'	C	1			X				X			4/24/24		X	X	X										
22	FL 86 @ 8'	C	1			X				X			4/24/24		X	X	X										
23	FL 87 @ 8'	C	1			X				X			4/24/24		X	X	X										
24	FL 88 @ 8'	C	1			X				X			4/24/24		X	X	X										
25	FL 89 @ 8'	C	1			X				X			4/24/24		X	X	X										
26	FL 90 @ 8'	C	1			X				X			4/24/24		X	X	X										
27	FL 91 @ 8'	C	1			X				X			4/24/24		X	X	X										
28	FL 92 @ 8'	C	1			X				X			4/24/24		X	X	X										
<p><b>PLEASE NOTE:</b> Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>																											
Relinquished By:		Date: 4/29/24		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		<p>REMARKS:</p> <p>Please email results and copy of CoC to pm@etechenv.com.</p>																	
Relinquished By:		Time: 7:42		Received By:		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																			
Relinquished By:		Date:		Received By:		Time:																					
Delivered By: (Circle One)				Sample Condition				CHECKED BY:																			
Sampler - UPS - Bus - Other:				Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>				(Initials)																			
				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																							
				Yes <input type="checkbox"/> No <input type="checkbox"/>																							

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## **Appendix E**

### **Multimedia Exposure Assessment Model (MULTIMED)**



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...

Run options

-----

Mt. Woburn Oil Company

Dagger Draw Trunk Line  
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

UNSATURATED ZONE FLOW MODEL PARAMETERS  
(input parameter description and value)

NP	- Total number of nodal points	240
NMAT	- Number of different porous materials	6
KPROP	- Van Genuchten or Brooks and Corey	1
IMSHGN	- Spatial discretization option	1
NVFLAYR	- Number of layers in flow model	6

OPTIONS CHOSEN  
-----  
Van Genuchten functional coefficients  
User defined coordinate system

Layer information

LAYER NO.	LAYER THICKNESS	MATERIAL PROPERTY
1	1.52	1

2	0.31	1
3	0.61	1
4	2.13	1
5	1.52	1
6	11.00	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	5.00	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.500	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.200	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	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	0.100	-999.	-999.	-999.
Brook and Corey exponent, EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-01	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.50	-999.	-999.	-999.

DATA FOR MATERIAL 2  
-----  
VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	0.500E-01	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.200	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	1.00	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	0.000	0.000	0.000

DATA FOR MATERIAL 2  
-----  
VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Residual water content	--	CONSTANT	0.700E-01	-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	1.50	-999.	-999.	-999.

DATA FOR MATERIAL 3  
-----  
VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	0.100E-02	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.450	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.300	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	0.000	0.000	0.000

DATA FOR MATERIAL 3  
-----  
VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Residual water content	--	CONSTANT	0.100	-999.	-999.	-999.
Brook and Corey exponent, EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.100E-01	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.20	-999.	-999.	-999.

DATA FOR MATERIAL 4  
-----  
VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	0.500E-01	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.200	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	1.00	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	0.000	0.000	0.000



DATA FOR MATERIAL 4  
-----  
VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Residual water content	--	CONSTANT	0.700E-01	-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	1.50	-999.	-999.	-999.

DATA FOR MATERIAL 5  
-----  
VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	20.0	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.350	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.200	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	0.000	0.000	0.000

DATA FOR MATERIAL 5  
-----  
VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Residual water content	--	CONSTANT	0.500E-01	-999.	-999.	-999.
Brook and Corey exponent, EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-01	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.80	-999.	-999.	-999.

DATA FOR MATERIAL 6  
-----  
VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	0.500	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.400	-999.	-999.	-999.

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Air entry pressure head	m	CONSTANT	0.600	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	0.000	0.000	0.000

DATA FOR MATERIAL 6

VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Residual water content	--	CONSTANT	0.800E-01	-999.	-999.	-999.
Brook and Corey exponent, EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.200E-01	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.50	-999.	-999.	-999.

UNSATURATED ZONE TRANSPORT MODEL PARAMETERS

NLAY - Number of different layers used6

NTSTPS - Number of time values concentration calc40

DUMMY - Not presently used1

ISOL - Type of scheme used in unsaturated zone1

N - Stehfest terms or number of increments18

NTEL - Points in Lagrangian interpolation3

NGPTS - Number of Gauss points104

NIT - Convolution integral segments2

IBOUND - Type of boundary condition3

ITSGEN - Time values generated or input1

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

1

DATA FOR LAYER 1

VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Thickness of layer	m	CONSTANT	1.52	-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.

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Biological decay coefficient 1/yr CONSTANT 0.000 -999. -999. -999.

DATA FOR LAYER 2  
-----  
VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Thickness of layer	m	CONSTANT	0.310	-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.

DATA FOR LAYER 3  
-----  
VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Thickness of layer	m	CONSTANT	0.610	-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.

DATA FOR LAYER 4  
-----  
VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Thickness of layer	m	CONSTANT	2.13	-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	1.50	-999.	-999.	-999.
Biological decay coefficient	1/yr	CONSTANT	0.000	-999.	-999.	-999.

DATA FOR LAYER 5  
-----  
VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Thickness of layer	m	CONSTANT	1.52	-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	1.50	-999.	-999.	-999.
Biological decay coefficient	1/yr	CONSTANT	0.000	-999.	-999.	-999.

DATA FOR LAYER 6

VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Thickness of layer	m	CONSTANT	11.0	-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	1.50	-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	774.	-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	0.730E+04	-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

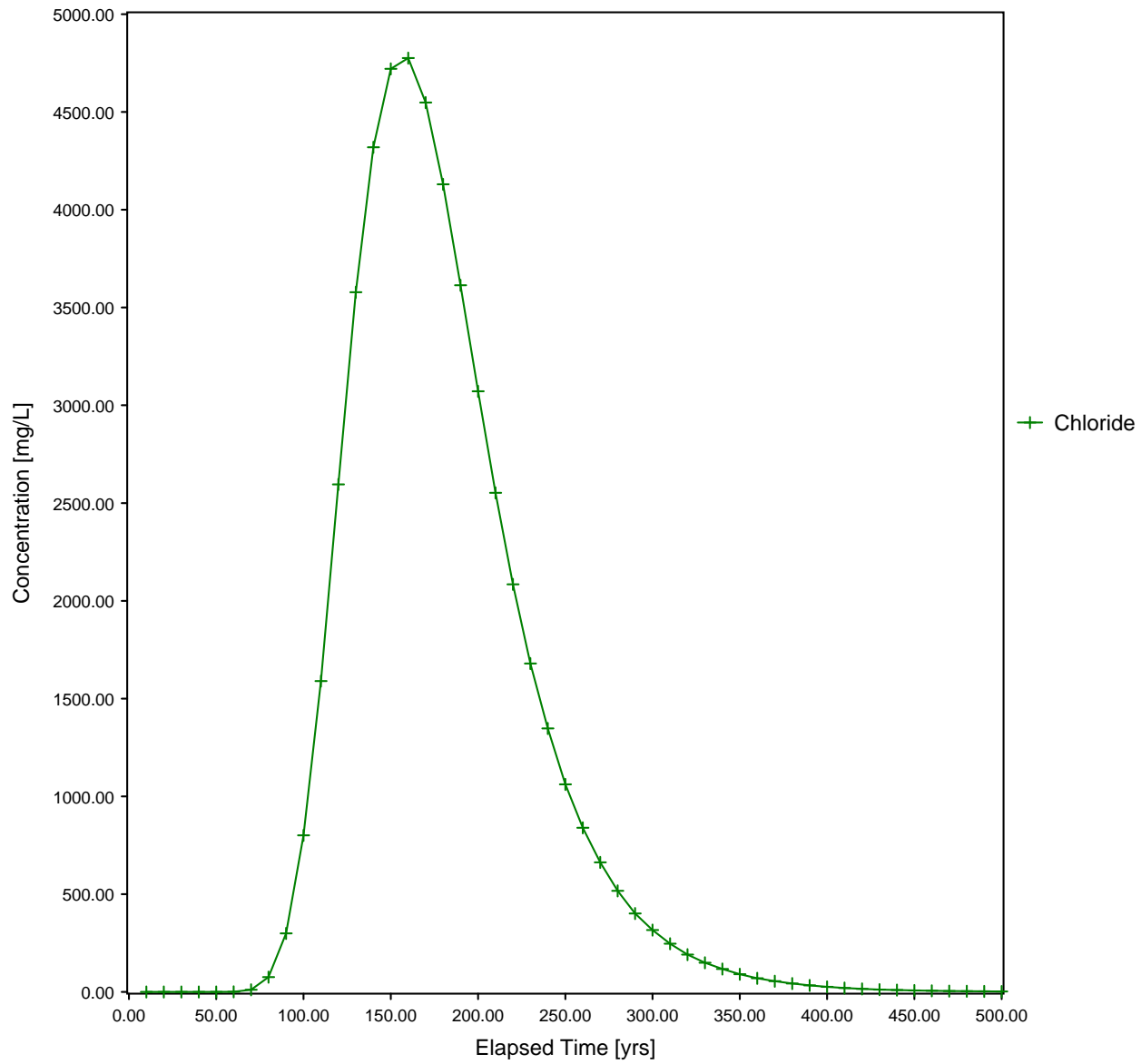
AQUIFER SPECIFIC VARIABLES

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 166.8 AT 500 YEARS

# Chloride Concentration at the Receptor Well (No Liner)

Mewbourne Oil Company  
Dagger Draw Trunk Line





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

1  
Run options  
-----

Mt. Airbourne Oil Company  
Dagger Draw Trunk Line  
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

1  
1  
UNSATURATED ZONE FLOW MODEL PARAMETERS  
(input parameter description and value)  
NP - Total number of nodal points 240  
NMAT - Number of different porous materials 4  
KPROP - Van Genuchten or Brooks and Corey 1  
IMSHGN - Spatial discretization option 1  
NVFLAYR - Number of layers in flow model 4

OPTIONS CHOSEN  
-----  
Van Genuchten functional coefficients  
User defined coordinate system

1

Layer information  
-----

LAYER NO.	LAYER THICKNESS	MATERIAL PROPERTY
1	1.52	1
2	3.05	1
3	1.52	1
4	11.00	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	5.00	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.500	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.200	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	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	0.100	-999.	-999.	-999.
Brook and Corey exponent, EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-01	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.50	-999.	-999.	-999.

DATA FOR MATERIAL 2

## VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	0.500E-01	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.200	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	1.00	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	0.000	0.000	0.000

DATA FOR MATERIAL 2

## VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Residual water content	--	CONSTANT	0.700E-01	-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	1.50	-999.	-999.	-999.

DATA FOR MATERIAL 3

## VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	20.0	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.350	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.200	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	0.000	0.000	0.000

DATA FOR MATERIAL 3

## VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Residual water content	--	CONSTANT	0.500E-01	-999.	-999.	-999.
Brook and Corey exponent, EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-01	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.80	-999.	-999.	-999.

DATA FOR MATERIAL 4

## VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	0.500	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.400	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.600	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	17.1	0.000	0.000	0.000

DATA FOR MATERIAL 4

## VADOSE ZONE FUNCTION VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Residual water content	--	CONSTANT	0.800E-01	-999.	-999.	-999.
Brook and Corey exponent, EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.200E-01	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.50	-999.	-999.	-999.

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NLAY	- Number of different layers used	4
NTSTPS	- Number of time values concentration calc	40
DDMY	- Not presently used	1
ISOL	- Type of scheme used in unsaturated zone	2
N	- Stehfest terms or number of increments	18
NDEL	- Points in Lagrangian interpolation	3
NPTS	- Number of Gauss points	104
NINT	- Convolution integral segments	2
BOUND	- Type of boundary condition	3
ISGEN	- Time values generated or input	1
TMAX	- Max simulation time	-- 0.0
WFUN	- 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	1.52	-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.

DATA FOR LAYER 2

-----

VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Thickness of layer	m	CONSTANT	3.05	-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.

DATA FOR LAYER 3

-----

VADOSE TRANSPORT VARIABLES

Area of waste disposal unit	m^2	CONSTANT	774.	-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	0.224E+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

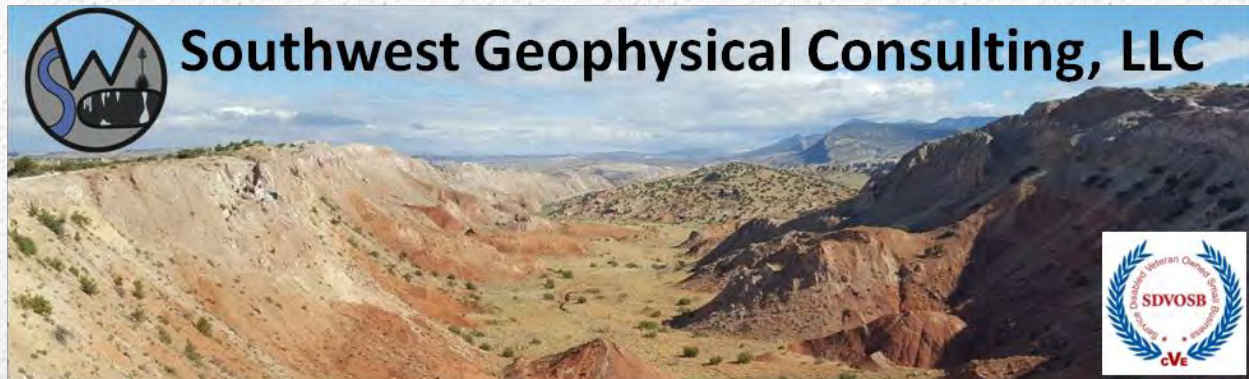
VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS			LIMITS	
			MEAN	STD	DEV	MIN	MAX
Particle diameter	cm	CONSTANT	-999.	-999.		-999.	-999.
Aquifer porosity	--	CONSTANT	0.300	-999.		-999.	-999.
Bulk density	g/cc	CONSTANT	1.86	-999.		-999.	-999.
Aquifer thickness	m	CONSTANT	6.10	-999.		-999.	-999.
Source thickness (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 4815 AT 158 YEARS

## **Appendix F**

### **Karst Survey**





# **Cave and Karst Resource Inventory Report Dagger Draw Trunkline Release Eddy County, New Mexico**

Prepared for:

**eTech Environmental & Safety Solutions, Inc.  
2617 West Marland Blvd.  
Hobbs, NM 88240**

- ☐ Positive within 200 feet of release footprint
- ☒ Negative within 200 feet of release footprint

**August 23, 2024**

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## 1.0 INTRODUCTION

An environmental karst survey was commissioned by eTech Environmental and Safety Solutions, Inc. (hereinafter referred to as "the client"), on July 16, 2024, for the purpose of determining the presence of karst-related surface features within the Dagger Draw Trunkline Release project site (hereinafter termed "DDTL").

As indicated in section **1.3 Affected Environment**, the bedrock and overlying soil at the survey site are susceptible to sinkhole development and karst features may be hidden beneath the existing soil stratum. Risk associated with sinkhole formation can be minimized during remediation by conducting a geophysical survey, and by the control of site hydrology. The owner/developer must recognize, however, that a risk of sinkhole collapse during remediation processes does exist. The owner/developer must evaluate the risks and attendant costs of not performing a geophysical survey prior to remediation and must be willing to accept these risks if it is decided that the cave survey is sufficient. Southwest Geophysical Consulting can provide a geophysical survey. If the decision is made to conduct a geophysical survey, a cost estimate and timeline will be provided upon request.

### **1.1 Goals of this Study**

To provide the client with the location and description of any surface karst-related features within 200 meters of the spill delineation boundary for the DDTL project site as provided by the client (**Dagger Draw Trunk Line GeoMeasure\_2024-03-22-10-36-07**) via e-mail on July 16, 2024.

### **1.2 Summary of Findings**

**No surface karst features are located within 200 feet (61 meters) of the spill delineation boundary.**

Pseudokarst (soil piping) was observed within the survey area. While not karst, soil piping still presents a trip and fall hazard for personnel, and tipping hazard for equipment and should be avoided if possible.

The lack of surface karst features does not mean the area is not karstified and the survey area may still contain buried karst features. Caution should be exercised while clearing brush and during any excavation, trenching, or construction operations. Employing a Bureau of Land Management approved karst monitor on site during these operations should be considered.

### 1.3 Affected Environment

The DDTL project is located in evaporite karst terrain, a landform that is characterized by underground drainage through solutionally enlarged conduits. Evaporite karst terrain may contain sinkholes, sinking streams, caves, and springs. Sinkholes leading to underground drainages and voids are common. These karst features, as well as occasional fissures and discontinuities in the bedrock, provide the primary sources for rapid recharge of the groundwater aquifers of the region. Karst may develop by hypogene processes involving dissolution by upwelling fluids from depth independent of recharge from the overlying or immediately adjacent surface. Hypogene karst systems may not be connected to the surface and can remain undiscovered unless encountered during drilling or excavation.

Karst features are delicate resources that are often of geological, hydrological, biological, and archeological importance, and should be protected. The three primary concerns in these types of terrain are environmental issues, worker safety, and infrastructure integrity.

The Bureau of Land Management (BLM) categorizes all areas within the Carlsbad Field Office (CFO) zone of responsibility as having either low, medium, high, or critical cave potential based on geology, occurrence of known caves, density of karst features, and potential impacts to freshwater aquifers<sup>[1]</sup>. These designations are also recognized by the New Mexico State Land Office (NMSLO). This project occurs within a **HIGH** karst occurrence zone (HKOZ)<sup>[2]</sup> (**Figure 1**).

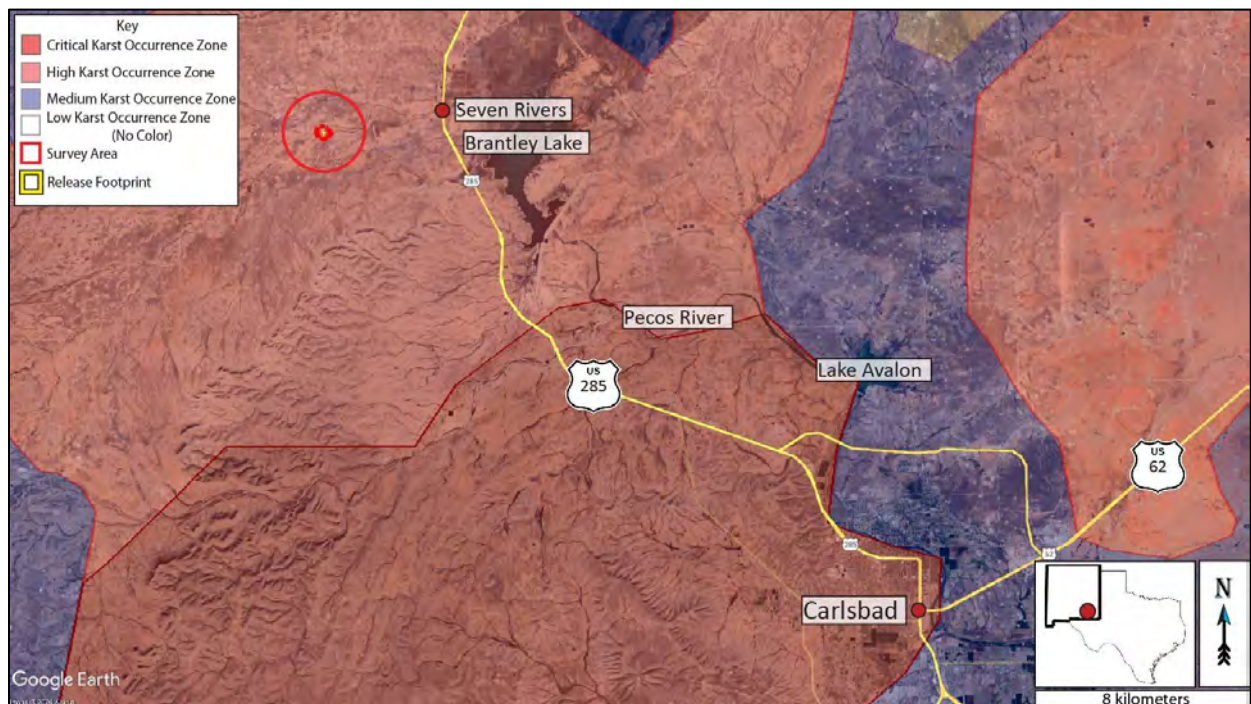


Figure 1: Karst occurrence zone overview. Background image: Google Earth. Image date: January 8, 2024. Datum: WGS-84.



A high karst occurrence zone is defined as an area in known soluble rock types that contains a high frequency of significant caves and karst features such as sinkholes, bedrock fractures that provide rapid recharge of karst aquifers, and springs that provide riparian habitat<sup>[1]</sup>.

#### **1.4 Limitations of Report**

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.

This report has been prepared for the use of eTech Environmental & Safety Solutions, Inc., in accordance with generally accepted consulting practices. Every effort has been made to ensure the information in this report is accurate as of the time of its writing. This report has not been prepared for use by parties other than the client, their contracting party, and their respective advisors. It may not contain sufficient information for the purposes of other parties or for other uses.

This report was prepared upon completion of the associated fieldwork using a standard template prepared by Southwest Geophysical Consulting and is based on information collected prior to fieldwork, conditions encountered on site, and data collected during the fieldwork and reviewed at the time of preparation. Southwest Geophysical Consulting disclaims responsibility for any changes that might have occurred at the site after this time. The interpreted results, locations, and depths noted in this report (if applicable) should be taken as an interpretation only and no decision should be based solely on this information. Physical verification of aerial imagery analysis results in the field should be conducted prior to conducting any remediation activities if these activities will impinge into the recommended buffers.

To the best of our knowledge, information contained in this report is accurate at the date of issue; however, conditions on the site can change in a limited time and, therefore, the information in this report shall not be used beyond three years past the date of imagery collection (see section **2.3 Description of Survey**).

## 2.0 LOCATION AND DESCRIPTION OF STUDY AREA

### 2.1 Description of Site

The DDTL project site is located in Eddy County, New Mexico, 29 kilometers (18 miles) northwest of Carlsbad, New Mexico, west of US285, at and just north of the South Seven Rivers arroyo (**Figure 1** and **Figure 2**). The survey area is within sections 10 and 15 of NM T20S R25E<sup>[3]</sup>. The region is semi-arid with an average annual precipitation of approximately 13 inches, of which about two-thirds falls as rain during summer thunderstorms from June to October. Summers are hot and sunny while winters are generally mild, with an average maximum temperature of 96°F in July and an average minimum temperature of 28°F in January<sup>[4]</sup>. This area is within the Chihuahuan Desert Thornscrub as defined by the Southwestern Regional ReGAP Vegetation map<sup>[5]</sup> and the vegetation consists mostly of areas of grass, sparse creosote, and sparse yucca, with very good visibility in most locations. See section **2.2 Local Geology** for the geology of the area. The project site is located entirely within an HKOZ<sup>[2]</sup> (**Figure 1**) and within privately managed land<sup>[6]</sup> (**Figure 2**).

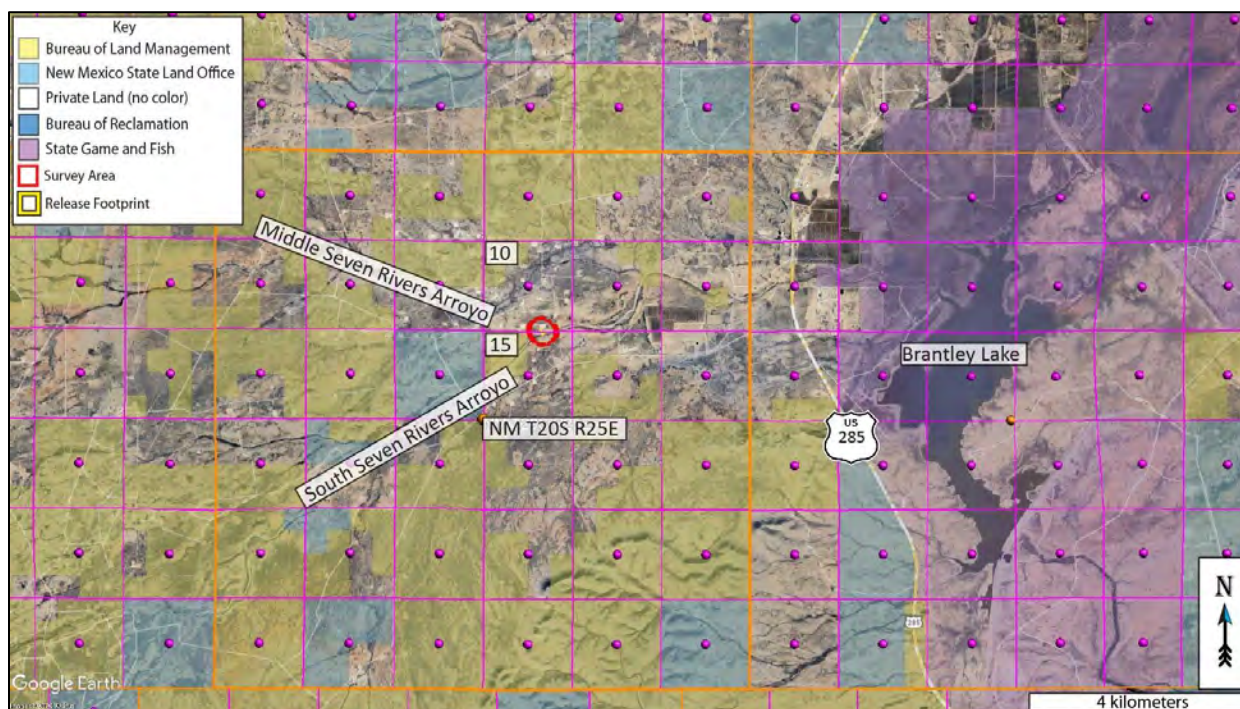


Figure 2: Land ownership<sup>[6]</sup> and PLSS<sup>[3]</sup> overview. Background image credit: Google Earth. Image date: January 8, 2024. Datum: WGS-84.

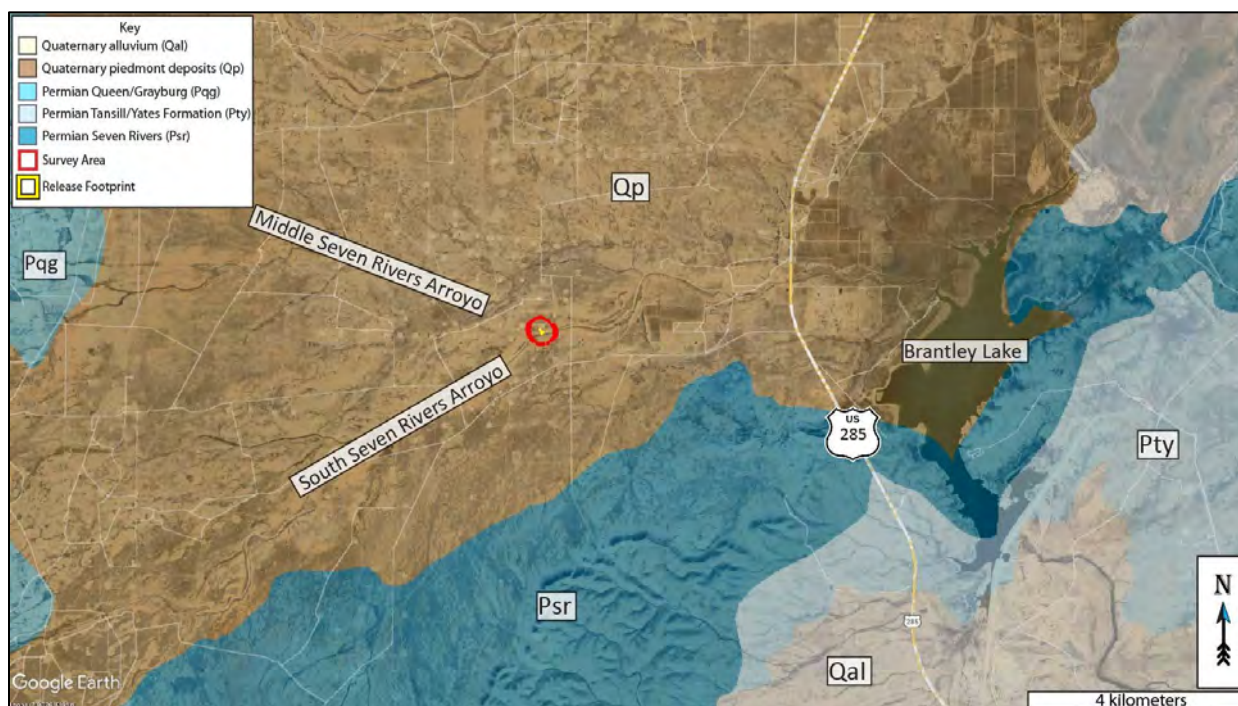
## 2.2 Local Geology

The area surveyed for the DDTL project is located at an elevation of 1,037 meters (3,402 feet),  $\pm$  7 meters (23 feet), and is underlain by the Permian Artesia Group (Pat). The area is mantled by thin gypsiferous soils and Quaternary piedmont gravels (Qp)<sup>[7]</sup> between 0 and 6 meters in depth (**Figure 3**).

The Artesia Group consists of the Greyburg and Queen Formations (Pqg), the Seven Rivers Formation (Psr), the Yates Formation (Py), and the Tansill Formation (Pt)<sup>[8]</sup>. At this location, it is most likely that the Seven Rivers Formation immediately underlies the Quaternary units, and that the Yates and Tansill have been eroded away.

The Seven Rivers is a back-reef facies containing interbeds of dolomite and gypsum with occasional sandstone lenses and thickly bedded anhydrite. Both the dolomite and gypsum/anhydrite are subject to karst formation. From north to south, the Seven Rivers transitions from an evaporite facies to a basin facies near the reef escarpment. This facies is prone to karst formation, especially along the contact with the Capitan Reef Front further to the south<sup>[8]</sup>.

The Seven Rivers overlies the Permian Queen Formation, a calcite rich siliciclastic unit<sup>[8]</sup>. Beneath the Queen lies the Greyburg, a dolomitic limestone.



**Figure 3: Geology overview.** Map credit: The Digital Geologic Map of New Mexico in ARC/INFO Format<sup>[9]</sup>, and Google Earth. Image date: January 8, 2024. Datum: WGS-84.



### 2.3 Description of Survey

Southwest Geophysical Consulting, in partnership with SWCA Environmental Consultants, provides aerial karst surveys using drones that are flown by qualified, FAA licensed drone pilots and that meet the stringent Bureau of Land Management – Carlsbad Field Office requirements for both pedestrian and aerial karst surveys. In addition, a field investigation was conducted at the request of the client to determine whether subsidence occurring at the site was karst-related.

Aerial karst surveys are conducted at low elevation following a preplanned raster pattern flightpath designed for the purpose of generating at least 75% imagery overlap. The collected high-resolution, georeferenced imagery is stitched together to develop orthomosaic imagery which is further developed into a digital elevation model (DEM); the DEM is then processed into a local relief model (LRM) (**Figure 4**). This LRM is color coded to enhance differences in elevation of as little as five centimeters. The orthoimagery, DEM, and LRM are uploaded to a server where they are analyzed by a highly qualified karst geologist. Finally, the data is reviewed by a senior karst geologist for quality assurance and downloaded into a table for inclusion in a written report<sup>[10]</sup>.

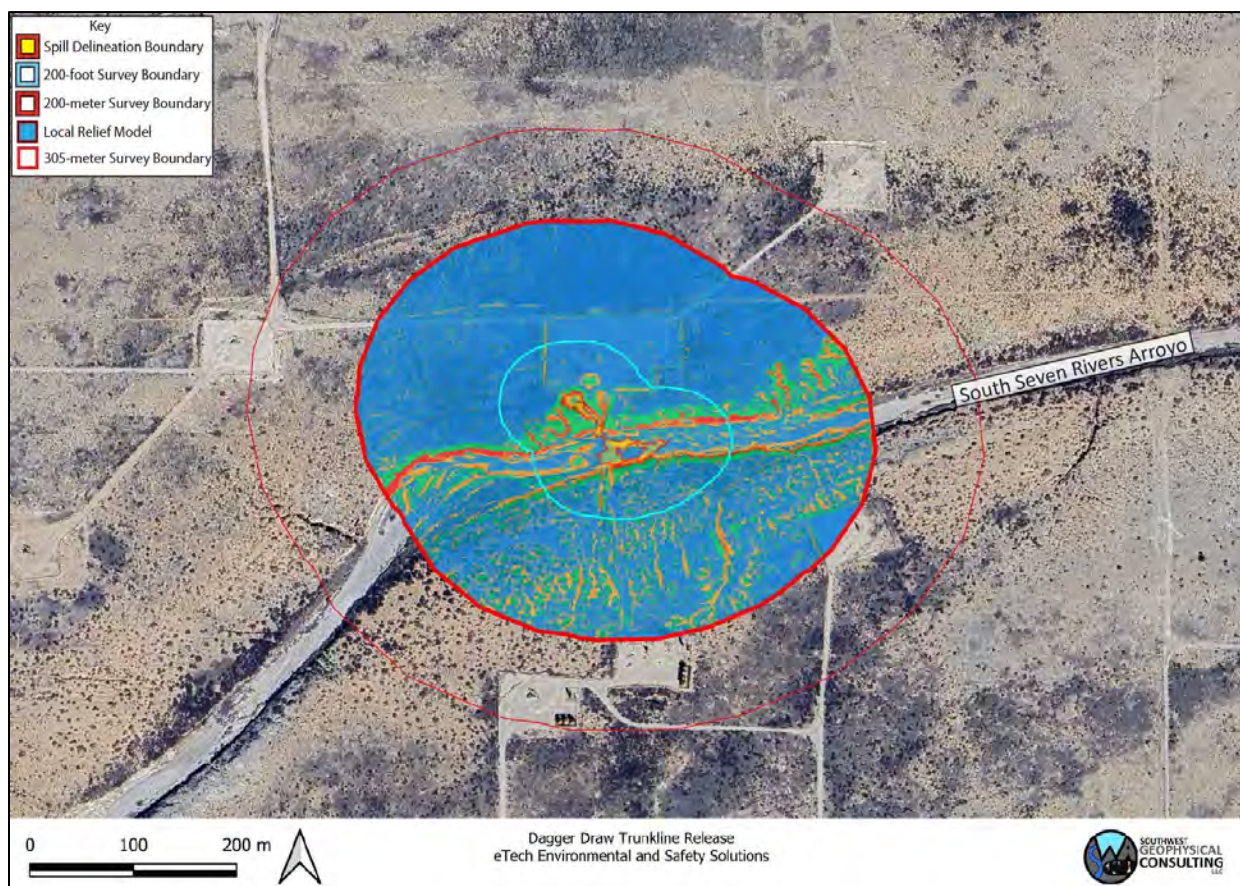


Figure 4: Survey overview. Background image credit: Google Earth. Image date: December 21, 2019. Datum: WGS-84.

Resolution of the orthoimagery is clear enough that features as small as 10 centimeters can be positively identified in most circumstances. Occasionally there are ambiguous features identified during an aerial survey that will need to be checked in the field if they are impacted by the release. Specifically, it is difficult to tell the difference between solution tubes, abandoned uncased well bores, and some burrows in drone imagery<sup>[11]</sup>. These features are marked with yellow dots in **Figure 4**. If a feature of any type is subsequently verified in the field prior to publication of the report, the dot will be changed to red triangle if confirmed as a karst feature or deleted if not.

The field investigation was conducted by Steven Kesler of Southwest Geophysical Consulting on July 16, 2024. It was determined that the subsidence was related to pseudokarst (soil piping) and not karst-related. These types of features can still be a trip and fall hazard to personnel and a tipping hazard to equipment and should be avoided if possible. Images available on request.

The imagery for the DDTL study was collected via aerial survey by Pat Lagodney of SWCA on July 21, 2024. Surface karst features may have developed after this date and will not be noted in this report. Imagery analysis was completed by Dave Decker of Southwest Geophysical Consulting on July 28, 2024.

Prior to conducting the aerial karst surveys, a surface karst desk study was performed by Southwest Geophysical Consulting. The study was performed using satellite and aerial imagery from Google Earth Pro dated December 21, 2019 (please note features less than one meter in diameter are generally not visible); the Southwest Geophysical Cave and Karst Database dated December 31, 2023<sup>[11]</sup>; and the Seven Rivers, NM, 1:24,000 quad, 1954, USGS topographic map. Please note that we use older topographic maps because newer maps have had caves removed from them. These searches and queries returned no results within the 305-meter (1,000-foot) survey boundary<sup>[12,13]</sup>.

## **2.4 Description of Karst Features**

**No surface karst features are located within 200 feet (61 meters) of the spill delineation boundary<sup>[13, 12]</sup> (Figure 4).**

The lack of surface karst features does not mean the area is not karstified. Please be aware that the area may contain buried karst features. Caution is advised while clearing brush and during trenching and excavation activities. Employing a BLM-CFO approved karst monitor on site during these activities should be considered.



Three small subsidence zones were found within the excavation (**Figure 5**). The subsidence is related to soil piping along trenches and previously established surface flow paths that were buried at some point. It was also noted that soil piping occurs near the northern edge of the South Seven Rivers arroyo, within the survey boundary.

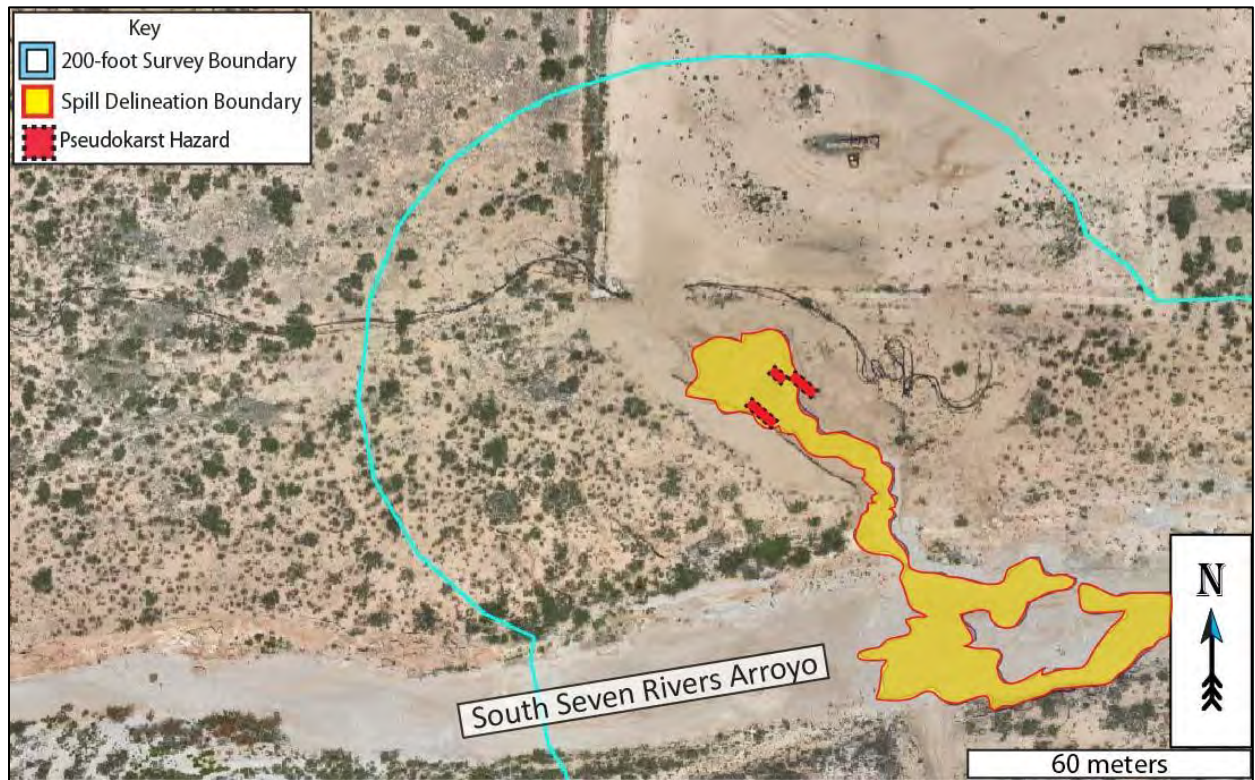


Figure 5: Survey closeup. Background image credit: Google Earth. Image date: December 21, 2019. Datum: WGS-84.



### 3.0 RECOMMENDATIONS

#### 3.1 Summary

- **No surface karst features are located within 200 feet (61 meters) of the spill delineation boundary.**
- Pseudokarst (soil piping) was identified within the aerial survey area, which may pose a hazard to equipment and personnel.
- Even though no surface karst features were found within the aerial karst survey boundary, this area has karst features nearby and may contain buried karst features.
- Caution should be exercised while clearing brush and during any excavation, trenching, drilling, or remediation operations.
- Employing a BLM-CFO approved karst monitor during excavation or remediation operations should be considered.

#### 3.2 Best Practices

This area may be prone to rapid karst formation in the underlying stratigraphy and warrants careful planning and engineering to mitigate karst-forming processes that could be accelerated by poor planning and considerations. Proper practices following karst guidelines should be implemented during all phases of remediation. Mitigation measures for any karst features revealed during excavation or drilling shall be approved by the Bureau of Land Management – Carlsbad Field Office and follow the Natural Resources Conservation Service Conservation Practice Standard for Karst Sinkhole Treatment, Code 527, or the Bureau of Land Management Cave and Karst Management Handbook, H-8380-1.

**Keep in mind that any flow of gypsum-undersaturated waters into a small crack or crevice can rapidly dissolve any underlying gypsum and cause failure of an impoundment or infrastructure within a matter of months to a few years.**

Vigilance during remediation is paramount. If voids are encountered during excavation or drilling, contact the Bureau of Land Management Karst Division at (575) 234-5972, the New Mexico State Land Office Surface Resources Division at (505) 827-5768, or a BLM-CFO approved karst vendor and request an on-site investigation from a karst expert if one is not already on site. A karst consultant can generally be available in Eddy County within five hours.

Approved karst monitors should have karst feature identification training, at least two years of supervised experience identifying karst features, wilderness first aid training, SRT training, confined space training, gas monitor training, and a minimum of SPAR cave rescue training through NCRC. They should have with them the proper gear and be prepared both physically and mentally to enter a collapse feature within minutes to perform a rescue if needed. Monitoring services with qualified karst monitors, as well as cave surveys and geophysical surveys, are available from Southwest Geophysical Consulting.

Under no circumstances should an untrained, inexperienced person enter a cave, pit, sinkhole, or collapse feature. All field employees of Southwest Geophysical Consulting have extensive caving experience and the ability to determine whether entry into a karst feature is safe or presents a hazard. In the event it is necessary to enter a karst feature, Southwest Geophysical Consulting can provide these services on request.

Cave and karst resource inventory reports for the BLM-CFO should be submitted to:

[blm\\_nm\\_karst@blm.gov](mailto:blm_nm_karst@blm.gov)

Cave and karst resource inventory reports for the NMSLO should be submitted to the respective project manager.

#### 4.0 REFERENCES

- 1 Goodbar, J. R. Vol. BLM Management Handbook H-8380-1 (ed Carlsbad Field Office) 59 (Bureau of Land Management, Denver, CO, 2015).
- 2 Rybacki, K. (Bureau of Land Management - Carlsbad Field Office, 2020).
- 3 Earthpoint. *Earthpoint Tools for Google Earth*, <<https://www.earthpoint.us/Townships.aspx>> (2022).
- 4 W.R.C.C. *National Climate Data Center 1981-2010 Normal Climate Summary for Carlsbad, New Mexico (291469)*, 2010).
- 5 Whitehead, W. & Flynn, C. *Plant Utilization in Southeastern New Mexico: Botany, Ethnobotany, and Archaeology*. (Bureau of Land Management, Carlsbad Field Office, 2017).
- 6 NMSLO. Digital overlay (KML) of the surface land ownership in New Mexico (New Mexico State Land Office, Santa Fe, NM, 2016).
- 7 Scholle, P. A. *Geologic Map of New Mexico*. (2003).
- 8 Silver, B. A. & Todd, R. G. Permian Cyclic Strata, Northern Midland and Delaware Basins, West Texas and Southeastern New Mexico. *The American Association of Petroleum Geologists Bulletin* **53**, 2223 - 2251 (1969).
- 9 Green, G. N. & Jones, G. E. *The Digital Geologic Map of New Mexico in ARC/INFO Format*, <<https://mrdata.usgs.gov/geology/state/state.php?state=NM>> (1997).
- 10 Whitehead, W., Bandy, M. & Decker, D. Protocol for Using UAV Photography for Rapid Assessment of Karst Features in Southeast New Mexico. *Proceedings of the 2022 Cave and Karst Management Symposium* (2022).
- 11 Decker, D. D. & Jorgensen, G. L. in *Southwest Geophysical Cave and Karst Database* (ed LLC Southwest Geophysical Consulting) (Albuquerque, NM, 2023).
- 12 Decker, D. & Jorgensen, G. L. *Environmental Karst Surveys White Paper* (Southwest Geophysical Consulting, LLC, 2024).
- 13 Division, O. C. *Title 19, Chapter 15, Part 29* (Oil Conservation Division, 2018).

## 5.0 GLOSSARY OF TERMS AND ABBREVIATIONS

BLM-CFO	Bureau of Land Management - Carlsbad Field Office
caprock-collapse sinkhole	Collapse of roof-spanning rock into a cave or void.
cave	Natural opening at the surface large enough for a person to enter.
cover-collapse sinkhole	Collapse of roof-spanning soil or clay ground cover into a subsurface void.
GPS	Global Positioning System
grike	A solutionally enlarged, vertical, or sub-vertical joint or fracture.
(H)	High confidence modifier for a PKF. This is typically reserved for a feature that is definitely karst but has not been confirmed in the field.
HKOZ	High Karst Occurrence Zone
InSAR	Interferometric Synthetic Aperture Radar. A method by which radar signals from satellites are processed to determine the amount and rate of subsidence of an area as well as whether the area is actively subsiding.
(L)	Low confidence modifier for a PKF. This is typically a feature that cannot be ruled out as karst but is most likely NOT karst related. This modifier may also be used for pseudokarst features.
LED	Locally enclosed depression. A natural depression on the surface that collects rainwater. Some contain swallets and/or caves, others do not.
LKOZ	Low Karst Occurrence Zone
(M)	Medium confidence modifier for PKF. This is an ambiguous feature that can't be positively identified as karst without a field visit (e.g., burrows, abandoned unlined wells, solution tubes, pseudokarst).
MKOZ	Medium Karst Occurrence Zone
NCRC	National Cave Rescue Commission
NKF	Non-karst feature. Used for features originally identified as PKF that have been subsequently identified in the field as non-karst related. This term may also be used for pseudokarst features.
NMSLO	New Mexico State Land Office
Pat	Permian Artesia Group
PdI	Permian Dewey Lake Formation
PKF	Possible karst feature. This term is reserved for features identified in satellite or aerial imagery that have NOT been visited in the field. Further modifiers include (H) for high confidence, (M) for medium confidence, and (L) for low confidence. These confidence levels are based on field experience.
PLSS	Public Land Survey System

Pqg	Permian Queen/Greyburg Formation
Pru	Permian Rustler Formation
pseudokarst	Karst-like features (sinkholes, conduits, voids etc.) that are not formed by dissolution. These types of features include soil piping, lava tubes, and some cover-collapse and suffosion sinkholes.
Psl	Permian Salado Formation
Psr	Permian Seven Rivers Formation
Pt	Permian Tansill Formation
Py	Permian Yates Formation
Qal	Quaternary alluvium
Qe	Quaternary eolian deposits
Qp	Quaternary piedmont deposits
Qpl	Quaternary playa lake deposits
RKF	Recognized karst feature. This term is reserved for karst features that have been physically verified in the field.
SKF	Surface Karst Feature
SPAR	Small Party Assisted Rescue
suffosion sinkhole	Raveling of soil into a pre-existing void or fracture.
swallet	A natural opening in the surface, too small for a person, that drains water to an aquifer. Some are "open," meaning a void can be seen below; some are "closed," meaning they are full of sediment.
SWG	Southwest Geophysical Consulting, LLC
UTM	Universal Transverse Mercator (projected coordinates)
(V)	Field verified modifier for a PKF. This indicates that the feature has been visited by a qualified karst professional in the field and fully identified
WGS	World Geodetic System (geographic coordinates)

## 6.0 ATTESTATION

### David D. Decker, PhD, PG, CPG

Chief Executive Officer, Principal Geologist  
Southwest Geophysical Consulting, LLC  
5117 Fairfax Dr. NW  
Albuquerque, NM 87114  
[dave@swgeophys.com](mailto:dave@swgeophys.com)  
(505) 585-2550

## CERTIFICATE OF AUTHOR

I, David D. Decker, a Licensed Professional Geologist and a Certified Professional Geologist, do certify that:

- I am currently employed as a consulting geologist in the specialty of caves and karst with an office address of 5117 Fairfax Dr. NW, Albuquerque, NM, USA, 87114.
- I graduated with a Master of Science in Applied Physics with a specialization in Sensor Systems from the Naval Post Graduate School in Monterey, California, in 2003, and a Doctor of Philosophy in Earth and Planetary Sciences from the University of New Mexico, Albuquerque, New Mexico, in 2018.
- I am a Licensed Professional Geologist in the State of Texas, USA (PG-15242) and have been since 2021. I am a Certified Professional Geologist through the American Institute of Professional Geologists (CPG-12123) and have been since 2021.
- I have been employed as a geologist continuously since 2016. I was previously employed as a Fire Controlman, Naval Flight Officer, and Aerospace Engineering Duty Officer in the U.S. Navy and operated, maintained, and installed various sensor systems including magnetic, electromagnetic, radar, communications, and acoustic systems in various capacities from 1986 through 2010.
- I have been involved in various aspects of cave and karst studies continuously since 1985, including exploration, mapping, and scientific studies.
- I have read the definition of “qualified karst professional” set out in the ASTM Standard (currently in review). I meet the definition of “qualified professional” for the purposes of ASTM E-1527.
- I am responsible for the content, compilation, and editing of all sections of report number ETEC-007-20240716 entitled, “Cave and Karst Resource Inventory Report, Dagger Draw Trunkline Release, Eddy County, New Mexico.” I or a duly authorized and qualified representative of Southwest Geophysical Consulting, LLC, have personally visited this site or reviewed the aerial imagery on the date or dates mentioned in section **2.3 Description of Survey**.



- I have no prior involvement nor monetary interest in the described property or project, save for my fee for conducting this investigation and providing the report.

Dated in Albuquerque, New Mexico, August 29, 2024.



David D. Decker  
PhD, CPG-12123



## **Appendix G**

### **Regulatory Correspondence**

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 329736  
**Date:** Wednesday, April 3, 2024 4:12:34 PM

---

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/08/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechenv.com](mailto:aaronr@etechenv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 329738  
**Date:** Wednesday, April 3, 2024 4:29:16 PM

---

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/09/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechenv.com](mailto:aaronr@etechenv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 329787  
**Date:** Wednesday, April 3, 2024 4:42:50 PM

---

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/10/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechenv.com](mailto:aaronr@etechenv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 329790  
**Date:** Wednesday, April 3, 2024 4:45:59 PM

---

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/11/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Aaron Rios

Phone: 432-701-8602, [aaronr@etechenv.com](mailto:aaronr@etechenv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505



**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 329793  
**Date:** Wednesday, April 3, 2024 4:47:29 PM

---

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/12/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Aaron Rios

Phone: 432-701-8602, [aaronr@etechnv.com](mailto:aaronr@etechnv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 332851  
**Date:** Friday, April 12, 2024 9:57:06 AM

---

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/16/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechnv.com](mailto:aaronr@etechnv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 332854  
**Date:** Friday, April 12, 2024 9:58:20 AM

---

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/17/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechnv.com](mailto:aaronr@etechnv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 332857  
**Date:** Friday, April 12, 2024 9:59:32 AM

---

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/18/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechenv.com](mailto:aaronr@etechenv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 332859  
**Date:** Friday, April 12, 2024 10:01:00 AM

---

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/19/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechenv.com](mailto:aaronr@etechenv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 335165  
**Date:** Thursday, April 18, 2024 5:21:37 PM

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To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/22/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechnv.com](mailto:aaronr@etechnv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505



**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 335167  
**Date:** Thursday, April 18, 2024 5:22:48 PM

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To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/23/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechenv.com](mailto:aaronr@etechenv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [OCDOnline@state.nm.us](mailto:OCDOnline@state.nm.us)  
**To:** [Connor Walker](#)  
**Subject:** [EXT] The Oil Conservation Division (OCD) has accepted the application, Application ID: 335168  
**Date:** Thursday, April 18, 2024 5:23:50 PM

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To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAPP2409454303.

The sampling event is expected to take place:

**When:** 04/24/2024 @ 08:00

**Where:** O-10-20S-25E 0 FNL 0 FEL (32.580784,-104.470355)

**Additional Information:** Sample Tech: Aaron Rios

Phone: 432-701-8602, [aaronr@etechenv.com](mailto:aaronr@etechenv.com)

**Additional Instructions:** From the intersection of White Pine Rd and Co Rd 27 (32.565078, -104.483960), head NW on Co Rd 27 for 0.52 mi, then N for 0.59 mi, then E for 1.06 mi, then E across the pad for 0.03 mi, then S for 0.24 mi, then E for 0.18 mi, then S for 0.05 mi, then S off the pad and into the pasture for 0.01 mi to arrive at the Dagger Draw Trunk Line release (32.580475, -104.470077)

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

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

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**From:** [Connor Walker](#)  
**To:** [Ben Arguijo](#)  
**Subject:** FW: [EXT] The Oil Conservation Division (OCD) has rejected the application, Application ID: 353748  
**Date:** Monday, September 30, 2024 3:17:02 PM

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**From:** OCDOnline@state.nm.us <OCDOnline@state.nm.us>  
**Sent:** Tuesday, July 2, 2024 9:18 AM  
**To:** Connor Walker <cwalker@mewbourne.com>  
**Subject:** [EXT] The Oil Conservation Division (OCD) has rejected the application, Application ID: 353748

To whom it may concern (c/o Connor Walker for MEWBOURNE OIL CO),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2409454303, for the following reasons:

- **Remediation proposal denied. At this time your variance request to install a clay liner at 8' is rejected. Excavation must be to the maximum extent practicable and agreeable to the OCD. If Mewbourne is concerned about karst collapse you will need to utilize means available to investigate the existence of karst features such as a standard penetration test or other means as appropriate. Submit report to the OCD by 9/30/2024.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 353748.

Please review and make the required correction(s) prior to resubmitting.

If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,  
Shelly Wells  
Environmental Specialist-A  
505-469-7520  
[Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**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  
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1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS  
  
Action 388581

QUESTIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID:
	14744
	Action Number:
	388581
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2409454303
Incident Name	NAPP2409454303 DAGGER DRAW TRUNK LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received

Location of Release Source

Please answer all the questions in this group.

Site Name	DAGGER DRAW TRUNK LINE
Date Release Discovered	03/22/2024
Surface Owner	Private

Incident Details

Please answer all the questions in this group.

Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	Yes
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Pipeline (Any)   Produced Water   Released: 113 BBL   Recovered: 85 BBL   Lost: 28 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

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**Santa Fe, NM 87505**

QUESTIONS, Page 2

Action 388581

**QUESTIONS (continued)**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID:	14744
	Action Number:	388581
	Action Type:	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Nature and Volume of Release (continued)</b>	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more; (2) an unauthorized release of a volume that: (b) may with reasonable probability reach a watercourse.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

**Initial Response**

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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

I hereby agree and sign off to the above statement	Name: Connor Walker Title: Senior Engineer Email: cwalker@mewbourne.com Date: 04/03/2024
--	---

**District I**

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

QUESTIONS, Page 3

Action 388581

**QUESTIONS (continued)**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID:	14744
	Action Number:	388581
	Action Type:	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS****Site Characterization**

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

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
A continuously flowing watercourse or any other significant watercourse	Zero feet, overlying, or within area
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1000 (ft.) and ½ (mi.)
Any other fresh water well or spring	Between 1000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Greater than 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Zero feet, overlying, or within area
Did the release impact areas not on an exploration, development, production, or storage site	Yes

**Remediation Plan**

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

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

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

Chloride	(EPA 300.0 or SM4500 Cl B)	25200
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	180
GRO+DRO	(EPA SW-846 Method 8015M)	154
BTEX	(EPA SW-846 Method 8021B or 8260B)	8.3
Benzene	(EPA SW-846 Method 8021B or 8260B)	0.1

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

On what estimated date will the remediation commence	03/27/2024
On what date will (or did) the final sampling or liner inspection occur	07/31/2024
On what date will (or was) the remediation complete(d)	07/31/2024
What is the estimated surface area (in square feet) that will be reclaimed	25540
What is the estimated volume (in cubic yards) that will be reclaimed	3784
What is the estimated surface area (in square feet) that will be remediated	25540
What is the estimated volume (in cubic yards) that will be remediated	4940

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

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



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**State of New Mexico**  
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**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS, Page 4

Action 388581

**QUESTIONS (continued)**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID:	14744
	Action Number:	388581
	Action Type:	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	Not answered.
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Connor Walker Title: Senior Engineer Email: cwalker@mewbourne.com Date: 09/30/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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

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

QUESTIONS, Page 5  
  
Action 388581

QUESTIONS (continued)

Operator:  MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID:	14744
	Action Number:	388581
	Action Type:	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

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

**District I**  
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**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS, Page 6  
  
Action 388581

**QUESTIONS (continued)**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID:
	14744
	Action Number:
	388581
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	335168
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/24/2024
What was the (estimated) number of samples that were to be gathered	125
What was the sampling surface area in square feet	16000

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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**Santa Fe, NM 87505**

CONDITIONS  
  
Action 388581

CONDITIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID:
	14744
	Action Number:
	388581
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

CONDITIONS

Created By	Condition	Condition Date
scwells	Remediation plan approved with conditions: Excavation of TT1 and TT2 areas should be furthered to a depth of at least 12 feet, up to and including samples FL 73 and FL 74. Photographic documentation of proof of excavation depth should be submitted with closure report. Then excavation can be backfilled with non waste containing soil up to a depth of 8 feet and a two foot clay liner may then be installed on the floor of the Upper Excavation. Prior to commencement of any activities, provide OCD information as to where clay will be sourced from and provide compaction information of the sourced clay. Remediation closure report is due to the OCD by 1/30/2025.	11/1/2024