


## Remediation Summary & Backfill Request

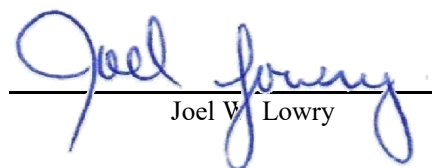
### **Mewbourne Oil Company PWMS Derringer to VF Line**

Eddy County, New Mexico  
Unit Letter "I", Section 25, Township 19 South, Range 28 East  
Latitude 32.628615 North, Longitude 104.122338 West  
**NMOCD Reference No. nAPP2134428244**

Prepared By:

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Midland • San Antonio • Lubbock • Hobbs • Lafayette

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## 1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Mewbourne Oil Company (Mewbourne), has prepared this *Remediation Summary & Backfill Request* for the release site known as the PWMS Derringer to VF Line (henceforth, "PWMS Derringer"). The legal description of the site is Unit Letter "I" (NE/SE), Section 25, Township 19 South, Range 28 East, in Eddy County, New Mexico. The property affected by the release is owned by the State of New Mexico and is administered by the New Mexico State Land Office (NMSLO). The geographic coordinates of the point of release are 32.628615° North latitude and 104.122338° West longitude. A topographic map of the area is provided as Figure 1.

On November 29, 2021, Mewbourne discovered a produced water release from a newly installed four-inch (4") poly line. Immediately upon discovery, the line was shut down, the pipeline was repaired, and a vacuum truck was dispatched to the site to recover any free-standing liquid. Approximately 100 barrels (bbls) of produced water were recovered during initial response activities. The total volume of the release was not able to be determined.

The release affected an area of pasture/rangeland measuring approximately 70,174 square feet. General photographs of the release are provided in Appendix C.

## 2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the PWMS Derringer 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 December 10, 2021, an investigative soil boring/temporary monitor well was drilled at the site 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 below ground surface (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 during a well gauging event conducted on December 13, 2021. The location of the investigative soil boring/temporary monitor well is depicted in Figure 2. A drilling log is provided in Appendix B.

New Mexico Oil Conservation Division (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, 2, 4, and 5.

### Site Characterization

What is the shallowest depth to groundwater beneath the area affected by the release?		
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

**Site Characterization (cont.)**

Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

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

Based on the volume and nature of the release, inferred depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standards for the PWMS Derringer release site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
>55'	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	600	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	100	100
	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	N/A	N/A
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

\* Measured in milligrams per kilogram (mg/kg)

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

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

**4.0 INITIAL SITE ASSESSMENT**

On December 9 and 10, 2021, an initial site assessment was conducted by a third-party environmental contractor that is no longer affiliated with the site. During the initial site assessment, a series of 27 soil bores and/or test trenches (PD-1 through PD-27) were advanced within the release margins in an effort to determine the vertical extent of impacted soil. In addition, four (4) hand-augered soil bores (Background-N, Background-E, Background-S, and Background-W) were advanced in unaffected areas around the release site in order to assess the background concentrations of contaminants of concern. During the advancement of the soil bores/test trenches, soil samples were collected and field-screened for concentrations of chloride utilizing a chloride test kit and/or the presence of Volatile Organic Compounds (VOCs) utilizing olfactory/visual senses.

Based on field observations and field test data, a total of 61 delineation soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH, and/or chloride. Based on laboratory analytical results, the vertical extent of impacted soil was adequately defined and ranged from approximately four (4) feet bgs in the areas characterized by sample points PD-3, PD-22, PD-23, PD-24, and PD-25 to 50 feet bgs in the areas characterized by sample points PD-10, PD-13, PD-14, PD-17, and PD-20.

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

On December 13, 2021, Mewbourne contracted Etech to assume remediation activities for the release.



## 5.0 PROPOSED REMEDIATION PLAN

Based on laboratory analytical results, site characteristics, and field observations made during the initial site assessment, Mewbourne proposed the following remediation activities designed to advance the PWMS Derringer release site toward an approved closure:

- Utilizing mechanical equipment, excavate impacted soil within the inferred release margins (approximately 70,174 square feet) to a total depth of four (4) feet bgs.
- Advance the sidewalls of the excavated area until laboratory analytical results indicate BTEX, TPH, and chloride concentrations are below the NMOCD Closure Criteria and NMOCD Reclamation Standards.
- Transport excavated soil to an NMOCD-permitted surface waste facility for disposal.
- Upon completion of excavation activities, collect representative composite confirmation soil samples from the excavation sidewalls in each cardinal direction, representing no more than 50 linear feet. Collect additional, discrete samples as necessary from wet or visibly stained areas inferred to have been affected by the release.
- Upon receiving laboratory analytical results from excavation confirmation soil samples, install a 20-mil, string-reinforced, polyurethane liner on the floor of the excavated area in the areas characterized by sample points PD-1, PD-2, PD-4 through PD-21, PD-26, and PD-27.
- Following installation of the 20-mil liner, backfill the excavated area with locally sourced, non-impacted, "like" material.
- Upon completion of remediation activities, prepare a *Remediation Summary & Soil Closure Request* detailing field activities and laboratory analytical results from confirmation soil samples.

## 6.0 REGULATORY APPROVALS & STIPULATIONS

In January 2022, a *Site Assessment Report & Proposed Remediation Workplan* was submitted to the NMOCD proposing the aforementioned remediation activities designed to advance the release site toward regulatory closure. In addition, due to safety and environmental concerns, Mewbourne requested a variance to Section 19.15.29.12.C(3) NMAC to leave chloride contamination beyond four (4) bgs in-situ in the areas characterized by sample points PD-1, PD-2, PD-4 through PD-21, PD-26, and PD-27. Permission was also requested to install a 20-mil, string-reinforced, polyurethane liner on the floor of the proposed excavation, atop the affected soil.

Please reference the *Site Assessment Report & Proposed Remediation Workplan* (henceforth, "Workplan") for additional details regarding site characterization and proposed remediation activities.

On February 28, 2022, the Workplan was denied by the NMOCD, citing a "lack of sufficient characterization data at depth to provide proof of environmental safety."

On March 3, 2022, representatives of Mewbourne met with representatives of the NMOCD Artesia District Office to discuss the site and determine a path forward to an approved closure. Mewbourne proposed to advance three (3) soil borings in representative areas of the excavation in order to sufficiently characterize the impacted soil to remain in-situ and to demonstrate that vertical delineation had been achieved. The proposal was approved by the NMOCD.

## 7.0 REMEDIATION ACTIVITIES SUMMARY

On January 14, 2022, remediation activities commenced at the release site. In accordance with the Workplan, impacted soil affected above the NMOCD Closure Criteria and NMOCD Reclamation Standards was excavated to approximately four (4) feet bgs and stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal. A Hach Quantab ® chloride test kit and/or olfactory/visual senses and/or were utilized to field-screen the horizontal extent of impacted soil and to guide the excavation. The sidewalls of the excavation were advanced until field tests and field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards.

On January 26, 2022, Etech collected eight (8) confirmation soil samples (NW #1, NW #2, NW #3, EW #1, EW #2, WW #1, WW #2, and WW #3) from the 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 BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. TPH and BTEX concentrations were also below the applicable laboratory method detection limit (MDL). Chloride concentrations ranged from 16.0 mg/kg in soil sample NW #2 to 416 mg/kg in soil sample WW #1.

On February 1, 2022, Etech collected nine (9) confirmation soil samples (EW #3, EW #4, EW #5, SW #1, SW #2, SW #3, SW #4, WW #4, and WW #5) from the sidewalls of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. TPH and BTEX concentrations were also below the applicable laboratory MDL. Chloride concentrations ranged from less than the laboratory MDL in soil samples EW #4, EW #5, and SW #3 to 112 mg/kg in soil sample SW #1.

On February 4, 2022, Etech collected seven (7) confirmation soil samples (NW #4, NW #5, EW #6, EW #7, WW #6, WW #8, and WW #9) from the sidewalls of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also below the applicable laboratory MDL. Chloride concentrations ranged from less than the laboratory MDL in soil sample EW #7 to 288 mg/kg in soil sample WW #6.

On February 11, 2022, Etech collected three (3) confirmation soil samples (SW #7, SW #8, and WW #8) from the sidewalls of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also below the applicable laboratory MDL. Chloride concentrations ranged from 64 mg/kg in soil sample SW #8 to 112 mg/kg in soil sample WW #8.

On February 14, 2022, Etech collected six (6) confirmation soil samples (EW #8, EW #9, SW #5, SW #6, WW #7, and WW #10) from the sidewalls of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also below the applicable laboratory MDL. Chloride concentrations ranged from less than the laboratory MDL in soil sample WW #10 to 128 mg/kg in soil sample EW #8.

On February 15, 2022, in accordance with the Workplan, upon receiving laboratory analytical results from confirmation soil samples, a 20-mil, string-reinforced, polyurethane liner was installed on the floor of the excavation atop impacted soil affected above the NMOCD Closure Criteria in the areas characterized by PD-1 through PD-27. The liner was sloped to facilitate shedding of moisture outside the footprint of the excavation and the maximum horizontal extent of in-situ impacted soil. Prior to installation of the liner, an approximate 6-inch layer of pad material was installed below the liner in an effort to maintain its integrity during future backfilling activities.

On March 10, 2022, in accordance with the NMOCD, an auger truck was utilized to advance three (3) boreholes (B.H. #1, B.H. #2, and B.H. #3) in the floor of the excavation in an effort to better characterize affected soil in areas representative of each section of the excavation, as well as the deepest zones of contamination. Borehole B.H. #1 was advanced in the southern portion of the excavation (the secondary pooling area of the release), in the area characterized by sample points PD-26 and PD-27. Borehole B.H. #2 was advanced in the northern portion of the main excavation (the primary pooling area of the release), in the area characterized by sample points PD-1 through PD-9. Borehole B.H. #3 was advanced in the southern portion of the main excavation, in the area characterized by sample points PD-10 through PD-21.

During the advancement of the boreholes, soil samples were collected and field-screened for concentrations of chloride utilizing a chloride test kit and/or the presence of VOCs utilizing olfactory/visual senses. Based on field observations and field test data, a total of 22 delineation soil samples (B.H. #1 @ 5' through B.H. #1 @ 30', B.H. #2 @ 5' through B.H. #2 @ 45', and B.H. #3 @ 5' through B.H. #3 @ 35') were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX and TPH concentrations were below the NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples, with the exception of soil sample B.H. #1 @ 15', which exhibited a TPH concentration of 143 mg/kg. BTEX concentrations were also below the laboratory MDL in each of the submitted soil samples. Chloride concentrations ranged from 32.0 mg/kg in soil sample B.H. #1 @ 30' to 10,200 mg/kg in soil sample B.H. #2 @ 5'. Based on these laboratory analytical results, the vertical extent of impacted soil was adequately characterized.

The locations of the boreholes are depicted in Figure 3, "Site & Sample Location Map". Drilling logs are provided in Appendix B.

On March 17, 2022, the damaged sections of liner around boreholes B.H. #1, B.H. #2, and B.H. #3 were replaced to ensure the structural integrity and impermeability of the liner were restored.

The dimensions of the excavated area are approximately 300 to 551 feet in length, 20 to 273 feet in width, and four (4) feet in depth. To date, Etech has transported approximately 16,536 cubic yards of impacted soil to an NMOCD-permitted surface waste facility for disposal.

The locations of the boreholes and confirmation soil samples, as well as the extents of the excavated area and liner, are depicted in Figure 3, "Site & Sample Location Map". Soil chemistry data is summarized in Table 1. Field data and soil profile logs are provided in Appendix B. General photographs of the release site are provided in Appendix C. Laboratory analytical reports are provided in Appendix E.

## 8.0 BACKFILL REQUEST

Impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards was excavated to the extent practicable due to safety and environmental concerns. All excavated soil was transported to an NMOCD-permitted facility for disposal. Laboratory analytical results from confirmation soil samples indicate concentrations of BTEX and TPH are below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards.

A 20-mil, string-reinforced, polyurethane liner was installed on the floor of the excavation in the areas characterized by sample points PD-1 through PD-27. This engineered control is designed to inhibit the vertical migration of chloride contamination remaining in-situ.

Etech utilized the Environmental Protection Agency's (EPA) Multimedia Exposure Assessment Model (MULTIMED) to determine if the contamination remaining in-situ under the liner poses a threat to groundwater quality. In addition to the synthetic liner, the MULTIMED assessment accounted for naturally occurring layers of clay and sandy clay that were encountered at various depths during the advancement of soil boring SB-1 and boreholes B.H. #1, B.H. #2, and B.H. #3 (see drilling logs in Appendix B). Using the most appropriate parameters for the site in regard to depth to groundwater (56 feet bgs), porosity of the various soil types, etc., the model indicates that the peak concentration of chloride in the underlying groundwater contributed by the contamination remaining in-situ would be approximately 241 mg/L in 301 years, versus 2,211 mg/L in 85.2 years if the excavation was not lined (see Appendix D).

Since the estimated peak chloride concentration in the underlying groundwater is below the standard of 250.0 mg/L specified in Section 20.6.2.3103 B.(1) NMAC, the MULTIMED model effectively demonstrates that leaving the chloride contamination in-situ "does not cause an imminent risk to human health, the environment, or ground water", pursuant to Section 19.15.29.12.C(2) NMAC.

Based on the information summarized above, Mewbourne hereby requests permission to cease remediation activities at the PWMS Derringer release site and to backfill the excavation.

Following backfilling, a *Remediation Summary & Soil Closure Request* will be submitted, documenting completed restoration, reclamation, and revegetation activities.

## **9.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN**

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 area 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 and/or lease roads will be reseeded with an agency and/or landowner-approved seed mixture during the first favorable growing season following closure of the site.

## **10.0 LIMITATIONS**

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Backfill Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents reference 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.

## **11.0 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*

***Hobbs Field Office***

*New Mexico State Land Office*

*2827 North Dal Paso Street*

*Suite 117*

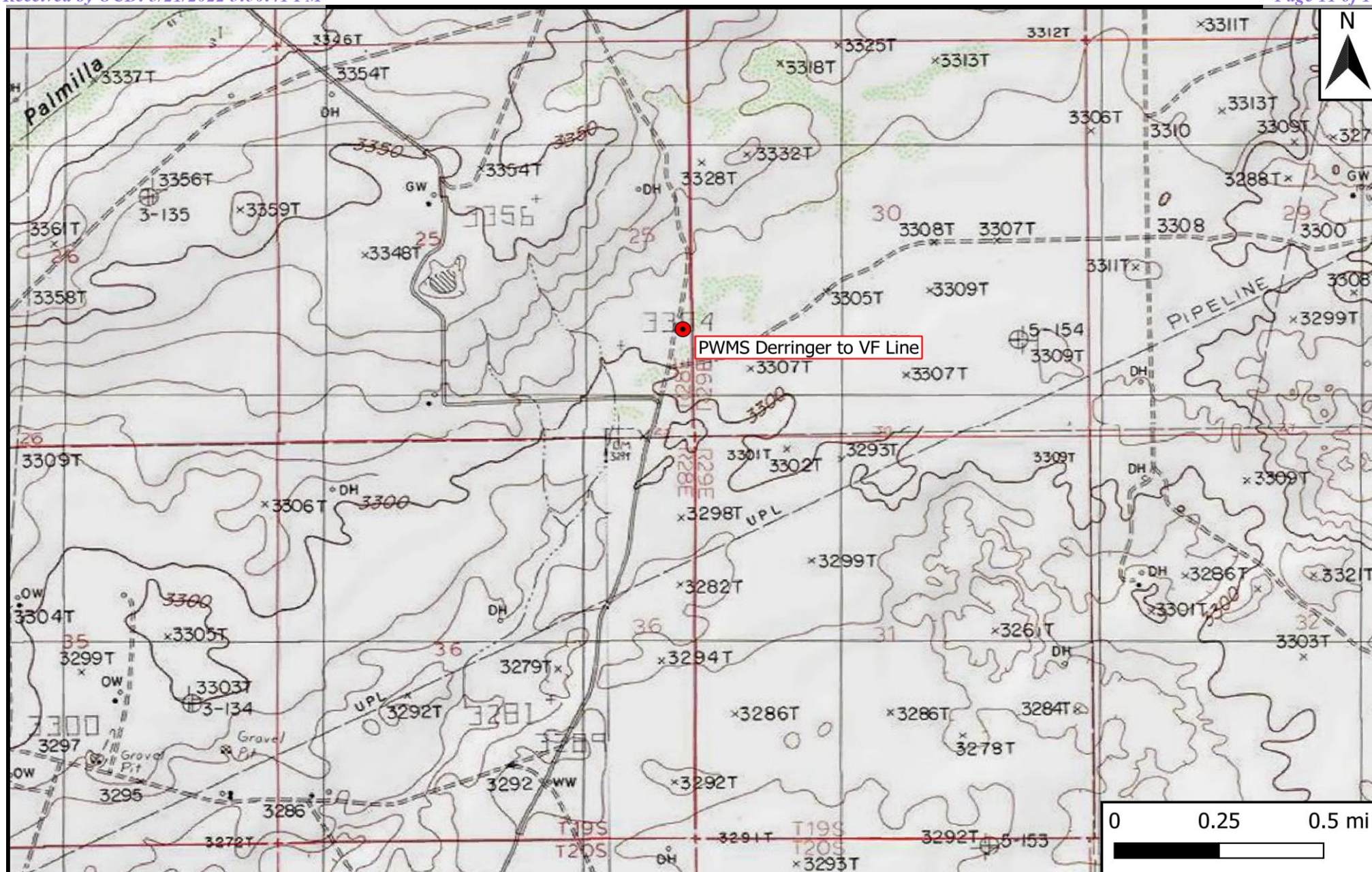
*Hobbs, NM 88240*

*(Electronic Submission)*

# **Figure 1**

## **Topographic Map**





## Legend

● Site Location

## Figure 1

Topographic Map  
 Mewbourne Oil Company  
 PWMS Derringer to VF Line  
 GPS: 32.628615, -104.122338  
 Eddy County

**eTECH**

Environmental & Safety Solutions, Inc.



Drafted: bja

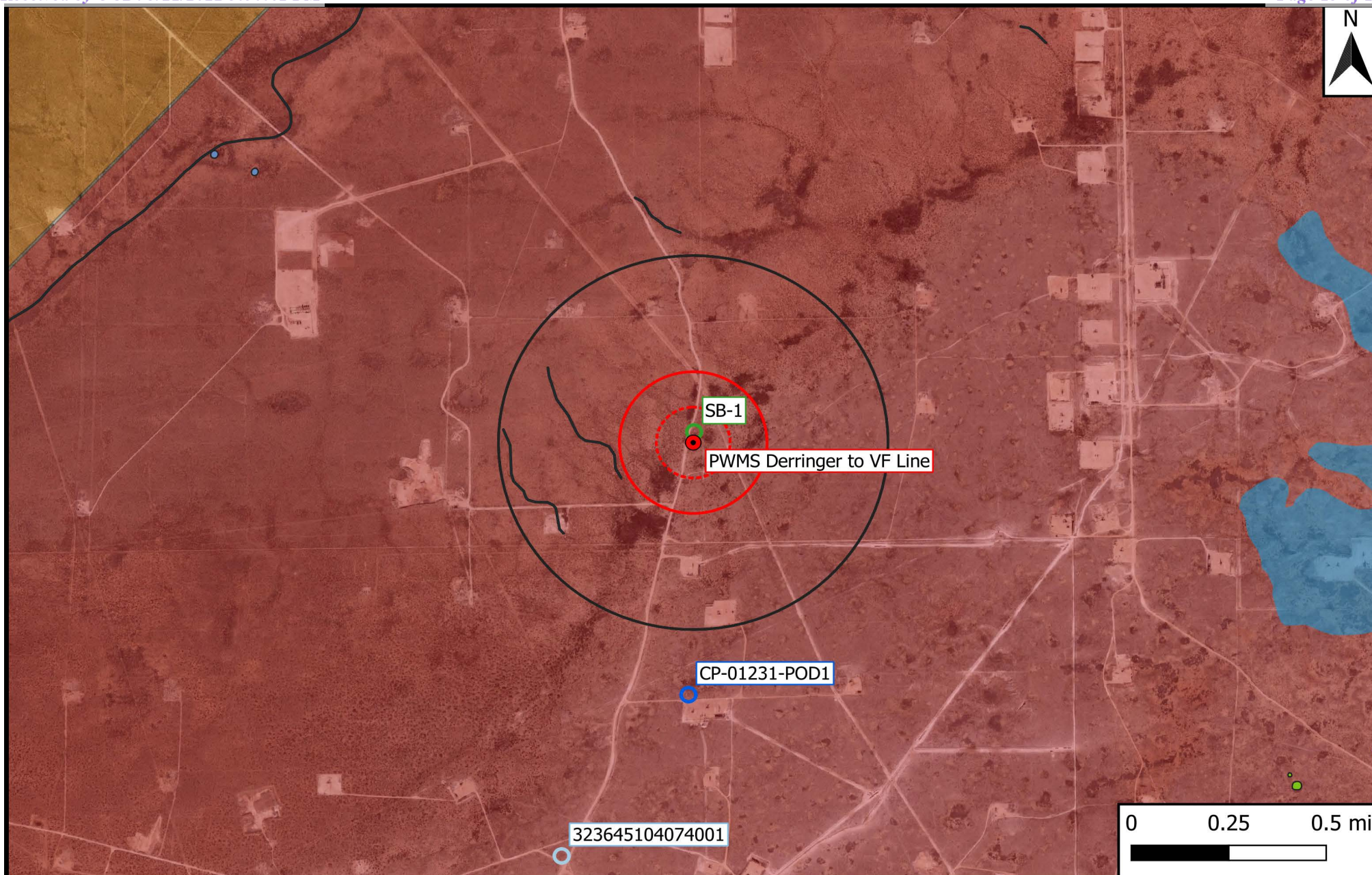
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Date: 12/13/21

## **Figure 2**

### **Aerial Proximity Map**





Legend		
● Site Location	1% Annual Flood Chance	500-Ft Radius
● Well - NMDS	Emergent/Forested Wetlands	1,000-Ft Radius
● Well - USGS	Freshwater Pond/Lake	0.5-Mi Radius
● Well - Exploratory/Monitor	Medium/High Karst	
— Potash Mine Workings	Riverline	

**Figure 2**  
Aerial Proximity Map  
Mewbourne Oil Company  
PWMS Derringer to VF Line  
GPS: 32.628615, -104.122261  
Eddy County

**eTECH**  
Environmental & Safety Solutions, Inc.

Drafted: bja

Checked: jwl

Date: 3/17/22

## **Figure 3**

### **Site & Sample Location Map**





<p><b>Legend</b></p> <ul style="list-style-type: none"><li>Lined Excavation (4' bgs)</li><li>Composite Wall Sample</li><li>Auger Hole</li><li>Background Sample Location</li><li>Delineation Sample Location</li><li>Exploratory Borehole</li></ul>	<p>Figure 3 Site &amp; Sample Location Map Mewbourne Oil Company PWMS Derringer to VF Line GPS: 32.628615,-104.122338 West Eddy County, NM</p>	<p><b>ETECH</b> Environmental &amp; Safety Solutions, Inc.</p> <p>Drafted: BJA   Checked: JWL   Date: 3/21/2022</p>
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**Table 1**  
**Concentrations of BTEX, TPH & Chloride in Soil**

Table 1 Concentrations of BTEX, TPH & Chloride in Soil Mewbourne Oil Company PWMS Derringer to VF Line NMOCD Ref. #: nAPP2134428244											
NMOCD Closure Criteria				10	50	-	-	-	-	100	600
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <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											
PD-1 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,680
PD-1 Vertical @ 45'	12/10/2021	45	In-Situ	-	-	-	-	-	-	-	16.0
PD-2 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,200
PD-2 Vertical @ 40'	12/10/2021	40	In-Situ	-	-	-	-	-	-	-	0.00
PD-3 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
PD-4 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,320
PD-4 Vertical @ 40'	12/10/2021	40	In-Situ	-	-	-	-	-	-	-	32.0
PD-5 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,200
PD-5 Vertical @ 25'	12/10/2021	25	In-Situ	-	-	-	-	-	-	-	32.0
PD-6 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,120
PD-6 Vertical @ 20'	12/10/2021	20	In-Situ	-	-	-	-	-	-	-	160
PD-7 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	47.7	47.7	<10.0	47.7	4,820
PD-7 Vertical @ 40'	12/10/2021	20	In-Situ	-	-	-	-	-	-	-	496
PD-8 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,440
PD-8 Vertical @ 25'	12/10/2021	25	In-Situ	-	-	-	-	-	-	-	32.0
PD-9 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,080
PD-9 Vertical @ 25'	12/10/2021	25	In-Situ	-	-	-	-	-	-	-	32.0
PD-10 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,560
PD-10 Vertical @ 50'	12/10/2021	50	In-Situ	-	-	-	-	-	-	-	32.0
PD-11 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,400
PD-11 Vertical @ 25'	12/10/2021	25	In-Situ	-	-	-	-	-	-	-	192
PD-12 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,680
PD-12 Vertical @ 25'	12/10/2021	25	In-Situ	-	-	-	-	-	-	-	208
PD-13 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,800
PD-13 Vertical @ 50'	12/10/2021	50	In-Situ	-	-	-	-	-	-	-	48.0
PD-14 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,800
PD-14 Vertical @ 50'	12/10/2021	50	In-Situ	-	-	-	-	-	-	-	16.0
PD-15 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	800
PD-15 Vertical @ 30'	12/10/2021	30	In-Situ	-	-	-	-	-	-	-	208
PD-16 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,880
PD-16 Vertical @ 16'	12/10/2021	16	In-Situ	-	-	-	-	-	-	-	192
PD-17 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	13.8	13.8	<10.0	13.8	3,160
PD-17 Vertical @ 50'	12/10/2021	50	In-Situ	-	-	-	-	-	-	-	16.0
PD-18 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	6,400
PD-18 Vertical @ 40'	12/10/2021	40	In-Situ	-	-	-	-	-	-	-	48.0
PD-19 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,200
PD-19 Vertical @ 35'	12/10/2021	35	In-Situ	-	-	-	-	-	-	-	176
PD-20 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,800
PD-20 Vertical @ 50'	12/10/2021	50	In-Situ	-	-	-	-	-	-	-	32.0
PD-21 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	20.6	20.6	<10.0	20.6	3,760

Dash (-): Not applicable OR sample not analyzed for that constituent.

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

<b>Table 1</b> <b>Concentrations of BTEX, TPH &amp; Chloride in Soil</b> <b>Mewbourne Oil Company</b> <b>PWMS Derringer to VF Line</b> <b>NMOCD Ref. #: nAPP2134428244</b>											
NMOCD Closure Criteria				10	50	-	-	-	-	100	600
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <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)
PD-21 Vertical @ 30'	12/10/2021	30	In-Situ	-	-	-	-	-	-	-	192
PD-22 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
PD-23 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	752
PD-24 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	0.00
PD-25 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
PD-26 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,440
PD-26 Vertical @ 20'	12/10/2021	20	In-Situ	-	-	-	-	-	-	-	0.00
PD-27 Vertical @ 4'	12/9/2021	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	3,600
PD-27 Vertical @ 30'	12/10/2021	30	In-Situ	-	-	-	-	-	-	-	0.00
B.H. #1 @ 5'	3/10/2022	5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,480
B.H. #1 @ 10'	3/10/2022	10	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,960
B.H. #1 @ 15'	3/10/2022	15	In-Situ	<0.050	<0.300	<10.0	143	143	<10.0	143	4,000
B.H. #1 @ 20'	3/10/2022	20	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,160
B.H. #1 @ 25'	3/10/2022	25	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,060
B.H. #1 @ 30'	3/10/2022	30	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
B.H. #2 @ 5'	3/10/2022	5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	10,200
B.H. #2 @ 10'	3/10/2022	10	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,440
B.H. #2 @ 15'	3/10/2022	15	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	8,530
B.H. #2 @ 20'	3/10/2022	20	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	7,730
B.H. #2 @ 25'	3/10/2022	25	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	5,120
B.H. #2 @ 30'	3/10/2022	30	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,480
B.H. #2 @ 35'	3/10/2022	35	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	496
B.H. #2 @ 40'	3/10/2022	40	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
B.H. #2 @ 45'	3/10/2022	45	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
B.H. #3 @ 5'	3/10/2022	5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	6,240
B.H. #3 @ 10'	3/10/2022	10	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,160
B.H. #3 @ 15'	3/10/2022	15	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,400
B.H. #3 @ 20'	3/10/2022	20	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	240
B.H. #3 @ 25'	3/10/2022	25	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	560
B.H. #3 @ 30'	3/10/2022	30	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	256
B.H. #3 @ 35'	3/10/2022	35	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	288
Excavation Samples											
NW #1	1/26/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
NW #2	1/26/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
NW #3	1/26/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
NW #4	2/4/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
NW #5	2/4/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
EW #1	1/26/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
EW #2	1/26/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
EW #3	2/1/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
EW #4	2/1/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0

Dash (-): Not applicable OR sample not analyzed for that constituent.

Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

<b>Table 1</b> <b>Concentrations of BTEX, TPH &amp; Chloride in Soil</b> <b>Mewbourne Oil Company</b> <b>PWMS Derringer to VF Line</b> <b>NMOCD Ref. #: nAPP2134428244</b>											
NMOCD Closure Criteria				10	50	-	-	-	-	100	600
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <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)
EW #5	2/1/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EW #6	2/4/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
EW #7	2/4/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EW #8	2/14/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
EW #9	2/14/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW #1	2/1/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
SW #2	2/1/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SW #3	2/1/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SW #4	2/1/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW #5	2/14/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW #6	2/14/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
SW #7	2/11/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SW #8	2/11/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
WW #1	1/26/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	416
WW #2	1/26/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
WW #3	1/26/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
WW #4	2/1/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
WW #5	2/1/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
WW #6	2/4/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	288
WW #7	2/14/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
WW #8	2/4/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
WW #9	2/4/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
WW #10	2/14/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WW #11	2/11/2022	2	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112

Dash (-): Not applicable OR sample not analyzed for that constituent.

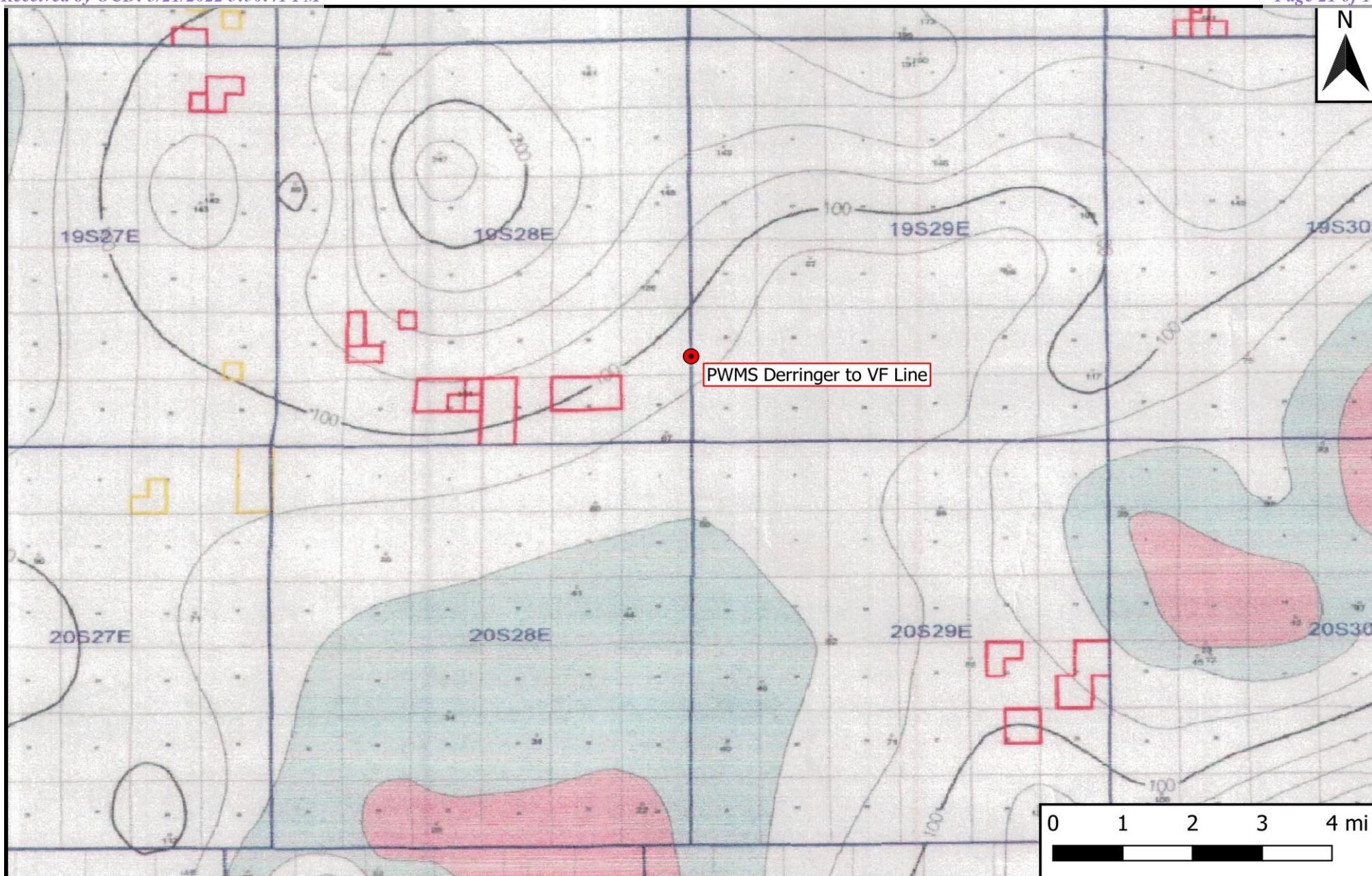
Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

## **Appendix A**

### **Depth to Groundwater Information**





## Legend

- Site Location

## Figure 4

Inferred Depth to Groundwater Trend Map  
 Mewbourne Oil Company  
 PWMS Derringer to VF Line  
 GPS: 32.628615, -104.122338  
 Eddy County

**eTECH**  
 Environmental & Safety Solutions, Inc.

Drafted: bja

Checked: jwl

Date: 12/13/21



# 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="#">CP 01231 POD1</a>		CP	ED	4	4	2	36	19S	28E	582311	3609372	1084	300	75	225

Average Depth to Water: 75 feet

Minimum Depth: 75 feet

Maximum Depth: 75 feet

**Record Count:** 1

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 582330.64

**Northing (Y):** 3610456.4

**Radius:** 1610

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12/20/21 12:04 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)			
<b>Well Tag</b>	<b>POD Number</b>	<b>Q64</b>	<b>Q16</b>	<b>Q4</b>	<b>Sec</b>	<b>Tw</b>	<b>Rng</b>	<b>X</b>	<b>Y</b>
	CP 01231 POD1	4	4	2	36	19S	28E	582311	3609372 

---

<b>Driller License:</b>	1654	<b>Driller Company:</b>	NOT WORKING FOR HIRE--SIRMAN DRILLING AND CONSTRUC	
<b>Driller Name:</b>				
<b>Drill Start Date:</b>	10/21/2013	<b>Drill Finish Date:</b>	10/21/2013	<b>Plug Date:</b>
<b>Log File Date:</b>	10/29/2013	<b>PCW Rev Date:</b>		<b>Source:</b> Shallow
<b>Pump Type:</b>		<b>Pipe Discharge Size:</b>		<b>Estimated Yield:</b> 80 GPM
<b>Casing Size:</b>	8.00	<b>Depth Well:</b>	300 feet	<b>Depth Water:</b> 75 feet

---

<b>Water Bearing Stratifications:</b>	<b>Top</b>	<b>Bottom</b>	<b>Description</b>
	200	300	Limestone/Dolomite/Chalk

---

<b>Casing Perforations:</b>	<b>Top</b>	<b>Bottom</b>
	220	300

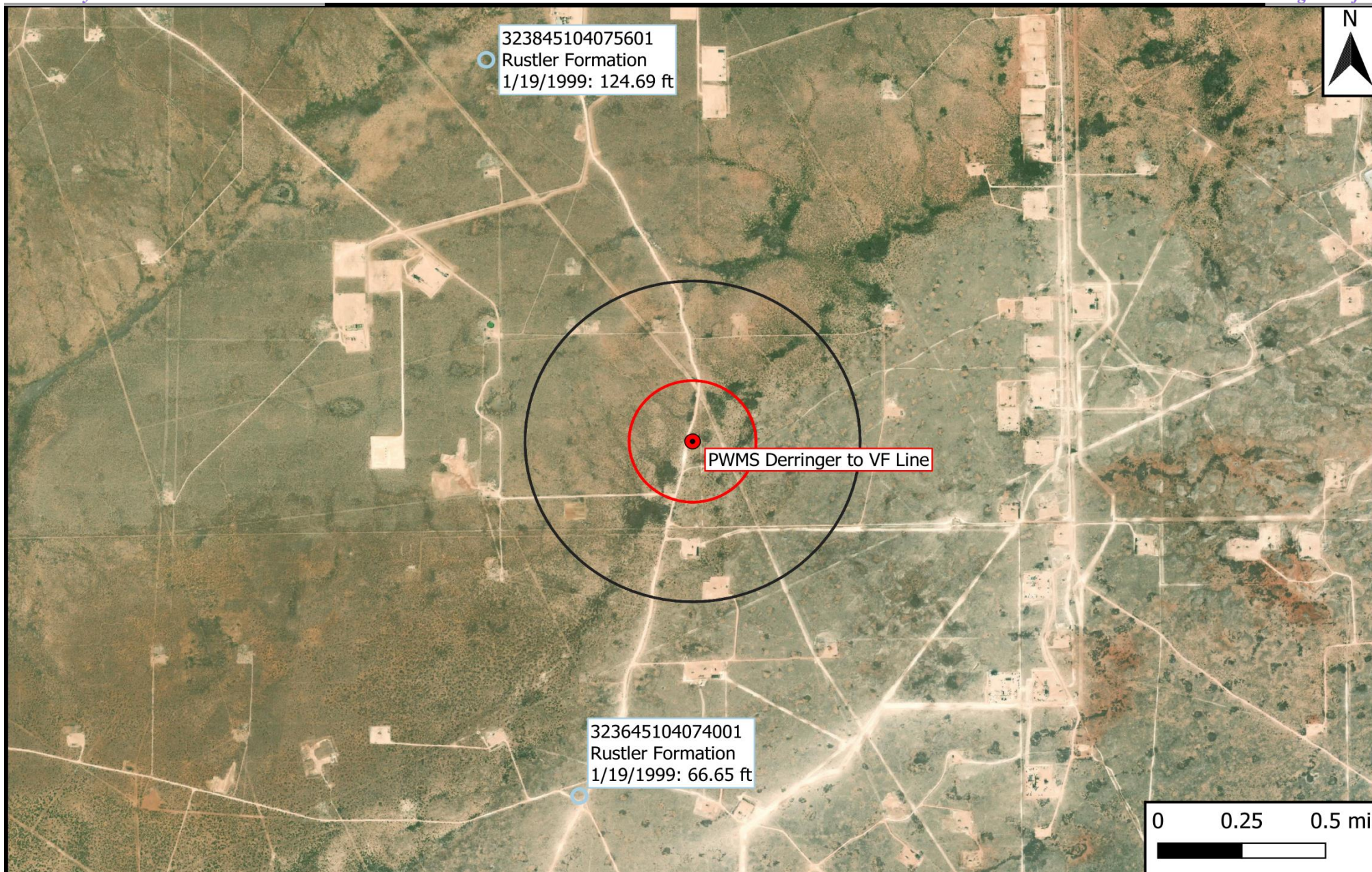
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12/20/21 12:04 PM

POINT OF DIVERSION SUMMARY





## Legend

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

## Figure 5

USGS Well Proximity Map  
Mewbourne Oil Company  
PWMS Derringer to VF Line  
GPS: 32.628615, -104.122338



Drafted: bja

Checked: jwl

Date: 12/13/21





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National Water Information System: Web Interface

USGS Water Resources

Data Category:  Geographic Area:

Click forNews Bulletins

Groundwater levels for the Nation

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

Search Results -- 1 sites found

Agency code = usgs

site\_no list =

- 323645104074001

Minimum number of levels = 1

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

USGS 323645104074001 19S.28E.36.43233

Eddy County, New Mexico

Latitude 32°36'45", Longitude 104°07'40" NAD27

Land-surface elevation 3,292 feet above NAVD88

The depth of the well is 87 feet below land surface.

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

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

Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
			72019								
1965-12-07			D 72019	69.03			1	Z			A
1968-04-02			D 72019	68.51			1	Z			A
1971-02-01			D 72019	71.75			1	Z			A
1976-12-09			D 72019	67.29			1	Z			A
1983-02-16			D 72019	67.18			1	Z			A
1986-06-03			D 72019	72.85			1	S			A

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
			72019								
1994-03-04			D	72019	66.68		1	S			A
1999-01-19			D	72019	66.65		1	S	USGS	S	A

## Explanation

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

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0.37 0.32 nadww02





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- 323845104075601

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USGS 323845104075601 19S.28E.24.32233

Eddy County, New Mexico  
Latitude 32°38'45", Longitude 104°07'56" NAD27  
Land-surface elevation 3,352 feet above NAVD88  
This well is completed in the Other aquifers (N9999OTHER) national aquifer.  
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

<a href="#">Table of data</a>
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<a href="#">Graph of data</a>
<a href="#">Reselect period</a>

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
			72019								
1965-11-03			D 72019	128.04			1	Z			A
1968-04-02			D 72019	128.15			1	Z			A
1971-02-01			D 72019	130.10			3	Z			A
1976-12-07			D 72019	126.36			1	Z			A
1983-02-16			D 72019	125.48			1	Z			A
1986-06-03			D 72019	125.43			1	S			A
1994-03-04			D 72019	124.82			1	S			A

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1999-01-19			72019	124.69			1	S	USGS	S	A

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Status	3	True value is above reported value due to local conditions
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Measuring agency	USGS	U.S. Geological Survey
Source of measurement		Not determined
Source of measurement	S	Measured by personnel of reporting agency.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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

Page Last Modified: 2021-12-20 14:06:39 EST

0.3 0.24 nadww01





## **Appendix B**

### **Field Data & Soil Profile Logs**



## Field Samples\*

Date: 12/8 - 12/10/2021

Project: PWMS Derringer to VF Line

Project Number: 15345 Latitude: 32.628615 Longitude: -104.122338

Sample ID	PID/Odor	Chloride Conc.	GPS
PD-1 @ 1'	None	4,799	
PD-1 @ 2'	None	6,298	
PD-1 @ 3'	None	4,199	
PD-1 @ 4'	None	6,148	
PD-1 @ 6'	None	5,698	
PD-1 @ 8'	None	5,398	
PD-1 @ 10'	None	7,498	
PD-1 @ 20'	None	1,972	
PD-1 @ 25'	None	2,524	
PD-1 @ 30'	None	1,492	
PD-1 @ 35'	None	2,524	
PD-1 @ 40'	None	1,859	
PD-1 @ 45'	None	300	
PD-2 @ 1'	None	5,698	
PD-2 @ 2'	None	4,948	
PD-2 @ 3'	None	4,799	
PD-2 @ 4'	None	4,499	
PD-2 @ 6'	None	7,498	
PD-2 @ 8'	None	6,298	
PD-2 @ 10'	None	7,498	
PD-2 @ 20'	None	2,524	
PD-2 @ 25'	None	1,972	
PD-2 @ 30'	None	1,600	
PD-2 @ 35'	None	904	
PD-2 @ 40'	None	300	
PD-3 @ 4'	None	300	
PD-4 @ 1'	None	7,198	
PD-4 @ 2'	None	6,448	
PD-4 @ 3'	None	6,748	
PD-4 @ 4'	None	6,748	
PD-4 @ 6'	None	6,598	
PD-4 @ 8'	None	5,998	
PD-4 @ 10'	None	1,799	
PD-4 @ 20'	None	1,972	
PD-4 @ 25'	None	1,840	
PD-4 @ 30'	None	1,128	
PD-4 @ 35'	None	776	
PD-4 @ 40'	None	300	

\*Samples collected and field-screened by a third-party contractor that is no longer affiliated with the site.



## Field Samples\*

Date: 12/8 - 12/10/2021

Project: PWMS Derringer to VF Line

Project Number: 15345 Latitude: 32.628615 Longitude: -104.122338

Sample ID	PID/Odor	Chloride Conc.	GPS
PD-5 @ 1'	None	6,298	
PD-5 @ 2'	None	5,998	
PD-5 @ 3'	None	6,598	
PD-5 @ 4'	None	6,898	
PD-5 @ 6'	None	7,198	
PD-5 @ 8'	None	7,498	
PD-5 @ 10'	None	6,448	
PD-5 @ 20'	None	1,200	
PD-5 @ 25'	None	300	
PD-6 @ 1'	None	7,498	
PD-6 @ 2'	None	7,198	
PD-6 @ 3'	None	7,498	
PD-6 @ 4'	None	6,448	
PD-6 @ 8'	None	2,280	
PD-6 @ 10'	None	712	
PD-6 @ 14'	None	840	
PD-6 @ 20'	None	300	
PD-7 @ 4'	None	6,298	
PD-7 @ 10'	None	6,748	
PD-7 @ 20'	None	7,648	
PD-7 @ 25'	None	3,749	
PD-7 @ 30'	None	5,098	
PD-7 @ 35'	None	1,200	
PD-7 @ 40'	None	300	
PD-8 @ 4'	None	13,852	
PD-8 @ 8'	None	4,144	
PD-8 @ 10'	None	4,856	
PD-8 @ 20'	None	1,799	
PD-8 @ 25'	None	300	
PD-9 @ 4'	None	2,720	
PD-9 @ 8'	None	1,676	
PD-9 @ 20'	None	14,995	
PD-9 @ 25'	None	300	
PD-10 @ 4'	None	13,852	
PD-10 @ 8'	None	4,856	
PD-10 @ 12'	None	2,524	
PD-10 @ 14'	None	1,600	
PD-10 @ 20'	None	3,899	

\*Samples collected and field-screened by a third-party contractor that is no longer affiliated with the site.



## Field Samples\*

Date: 12/8 - 12/10/2021

Project: PWMS Derringer to VF Line

Project Number: 15345 Latitude: 32.628615 Longitude: -104.122338

Sample ID	PID/Odor	Chloride Conc.	GPS
PD-10 @ 25'	None	5,698	
PD-10 @ 30'	None	1,050	
PD-10 @ 35'	None	1,050	
PD-10 @ 40'	None	1,050	
PD-10 @ 45'	None	750	
PD-10 @ 50'	None	300	
PD-11 @ 4'	None	9,990	
PD-11 @ 8'	None	976	
PD-11 @ 20'	None	1,200	
PD-11 @ 25'	None	300	
PD-12 @ 4'	None	6,128	
PD-12 @ 8'	None	6,128	
PD-12 @ 10'	None	6,128	
PD-12 @ 20'	None	600	
PD-12 @ 25'	None	300	
PD-13 @ 4'	None	6,128	
PD-13 @ 8'	None	4,144	
PD-13 @ 10'	None	4,856	
PD-13 @ 20'	None	4,499	
PD-13 @ 25'	None	4,499	
PD-13 @ 30'	None	2,999	
PD-13 @ 35'	None	2,999	
PD-13 @ 40'	None	1,050	
PD-13 @ 45'	None	1,050	
PD-13 @ 50'	None	300	
PD-14 @ 4'	None	13,852	
PD-14 @ 8'	None	6,128	
PD-14 @ 10'	None	4,144	
PD-14 @ 20'	None	3,899	
PD-14 @ 25'	None	3,899	
PD-14 @ 30'	None	2,399	
PD-14 @ 35'	None	2,399	
PD-14 @ 40'	None	1,350	
PD-14 @ 45'	None	1,350	
PD-14 @ 50'	None	300	
PD-15 @ 4'	None	13,852	
PD-15 @ 8'	None	7,148	
PD-15 @ 10'	None	4,488	

\*Samples collected and field-screened by a third-party contractor that is no longer affiliated with the site.



## Field Samples\*

Date: 12/8 - 12/10/2021

Project: PWMS Derringer to VF Line

Project Number: 15345 Latitude: 32.628615 Longitude: -104.122338

Sample ID	PID/Odor	Chloride Conc.	GPS
PD-15 @ 12'	None	4,144	
PD-15 @ 14'	None	3,236	
PD-15 @ 20'	None	750	
PD-15 @ 25'	None	300	
PD-15 @ 30'	None	300	
PD-16 @ 4'	None	13,852	
PD-16 @ 8'	None	13,852	
PD-16 @ 10'	None	13,852	
PD-16 @ 12'	None	2,524	
PD-16 @ 14'	None	1,600	
PD-16 @ 20'	None	600	
PD-16 @ 25'	None	600	
PD-16 @ 30'	None	300	
PD-17 @ 4'	None	13,852	
PD-17 @ 8'	None	2,056	
PD-17 @ 12'	None	1,860	
PD-17 @ 14'	None	3,236	
PD-17 @ 18'	None	976	
PD-17 @ 20'	None	3,299	
PD-17 @ 25'	None	3,299	
PD-17 @ 30'	None	1,799	
PD-17 @ 35'	None	1,799	
PD-17 @ 40'	None	1,050	
PD-17 @ 45'	None	1,050	
PD-17 @ 50'	None	300	
PD-18 @ 4'	None	13,852	
PD-18 @ 8'	None	976	
PD-18 @ 12'	None	1,212	
PD-18 @ 14'	None	1,212	
PD-18 @ 20'	None	3,299	
PD-18 @ 25'	None	3,299	
PD-18 @ 30'	None	1,799	
PD-18 @ 35'	None	1,799	
PD-18 @ 40'	None	300	
PD-19 @ 4'	None	3,824	
PD-19 @ 12'	None	4,144	
PD-19 @ 14'	None	4,856	
PD-19 @ 20'	None	1,500	

\*Samples collected and field-screened by a third-party contractor that is no longer affiliated with the site.



## Field Samples\*

Date: 12/10/2021

Project: PWMS Derringer to VF Line

Project Number: 15345 Latitude: 32.628615 Longitude: -104.122338

Sample ID	PID/Odor	Chloride Conc.	GPS
PD-19 @ 25'	None	1,500	
PD-19 @ 30'	None	1,050	
PD-19 @ 35'	None	300	
PD-20 @ 4'	None	7,148	
PD-20 @ 8'	None	2,720	
PD-20 @ 10'	None	6,128	
PD-20 @ 18'	None	4,144	
PD-20 @ 20'	None	3,149	
PD-20 @ 25'	None	3,299	
PD-20 @ 30'	None	3,299	
PD-20 @ 35'	None	1,050	
PD-20 @ 40'	None	1,050	
PD-20 @ 45'	None	1,050	
PD-20 @ 50'	None	300	
PD-21 @ 4'	None	4,144	
PD-21 @ 8'	None	4,144	
PD-21 @ 14'	None	2,524	
PD-21 @ 20'	None	1,300	
PD-21 @ 25'	None	776	
PD-22 @ 4'	None	300	
PD-23 @ 4'	None	300	
PD-24 @ 4'	None	300	
PD-25 @ 4'	None	300	
PD-26 @ 4'	None	5,998	
PD-26 @ 8'	None	6,148	
PD-26 @ 18'	None	1,050	
PD-26 @ 20'	None	300	
PD-27 @ 4'	None	2,699	
PD-27 @ 8'	None	6,598	
PD-27 @ 18'	None	2,524	
PD-27 @ 20'	None	1,799	
PD-27 @ 25'	None	1,050	
PD-27 @ 30'	None	300	

\*Samples collected and field-screened by a third-party contractor that is no longer affiliated with the site.



# Sample Log

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

Project: PWMS Derringer to Winchester Line

Project Number: 15345 Latitude: 32.628577 Longitude: -104.122261

Sample ID	PID/Odor	Chloride Conc.	GPS
NW #1.	—	ND	
NW #2.	—	ND	
WW #1.	—	492	
SW #1.	—	2,536	
EW #1.	—	2,536	
WW #2.	—	772	
WW #2.	—	172	
WW #3.	—	200	
SW test	—	2,536	
<del>SW</del> NW #3.	—	908	
EW #1.	—	260	
NW #3.	—	292	
SW #1.	—	2,536	
SW #1.	—	772	
EW #2.	—	144	
SW #1.	—	620	
SW #1.	—	286	
WW #4.	—	996	
SW #2.	—	1,768	
SW #2.	—	204	
<del>SW</del> EW #3.	—	ND	
EW #4.	—	236	
EW #5.	—	792	
EW #5.	—	204	
EW #6.	—	2,536	
WW #4	—	204	
SW #3.	—	286	
SW #4.	—	ND	
WW #5.	—	236	
WW #6.	—	516	
EW #6.	—	386	
WW #7.	—	2,536	
NW #4.	—	ND	
NW #5.	—	384	
EW #7.	—	144	
WW #8.	—	144	

Sample Point = SP #1 @ ## etc

Test Trench = TT #1 @ ##

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

Floor = FL #1 etc

Refusal = SP #1 @ 4'-R

Stockpile = Stockpile #1

Sidewall = SW #1 etc

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

GPS Sample Points, Center of Comp Areas





### Sample Log

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

Project: Pwms Derringer to Winchester Line

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

[illegible]

Sample Point = SP #1 @ ## etc

**Floor = FL #1 etc**

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

**Stockpile = Stockpile #1**

GPS Sample Points, Center of Comp Areas



## Sample Log

Date:

3-10-22

Project: Winchester

Project Number:

Latitude:

Longitude:

[illegible]

**Sample Point = SP #1 @ ## etc**

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R


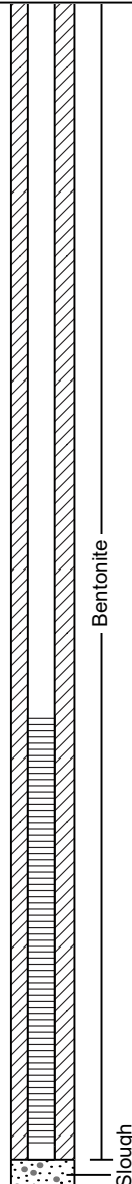
Soil Intended to be Deferred = SP #1 @ 4' In-Situ

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

Stockpile = Stockpile #1

### GPS Sample Points, Center of Comp Areas

# Soil Boring/Temporary Monitor Well BH-1

<b>Company:</b> Mewbourne Oil Company <b>Site:</b> PWMS Derringer to VF Line <b>NMOCD Reference #:</b> nAPP2134428244 <b>Location:</b> Eddy Co., NM <b>PLSS:</b> U/L "M", Sec. 25, T19S, R28E			<b>Well/Borehole ID:</b> SB-1 <b>Coordinates (NAD 83):</b> 32.629031,-104.122296 <b>Drilling Date:</b> 12/10/2021 <b>Depth of Boring (ft):</b> 55 <b>Depth to Groundwater (ft):</b> >55 <b>Plugging Date:</b> 12/13/2021			<b>Drilling Company:</b> Ready Drill, Inc. <b>Driller:</b> Ready Drill, Inc. <b>Drilling Method:</b> Air Rotary <b>Logged By:</b> Ready Drill, Inc. <b>Drafted By:</b> B. Arguijo <b>Draft Date:</b> 12/17/2021		
<b>Completion:</b> N/A			<b>Casing:</b> N/A			<b>Screen:</b> N/A		
<b>Comments:</b> N/A								
Depth (ft)	Groundwater	Lithology	Material Description	Chloride Field Test	Lab Result	PID Reading	Well Construction	
5			Sandy Dirt	-	-	-		Bentonite  

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

# Soil Boring/Temporary Monitor Well B.H. #1

<b>Company:</b> Mewbourne Oil Company <b>Site:</b> PWMS Derringer to VF Line <b>NMOCD Reference #:</b> nAPP2134428244 <b>Location:</b> Eddy Co., NM <b>PLSS:</b> U/L "M", Sec. 25, T19S, R28E			<b>Well/Borehole ID:</b> B.H. #1 <b>Coordinates (NAD 83):</b> 32.627703,-104.121920 <b>Drilling Date:</b> 3/10/2022 <b>Depth of Boring (ft):</b> 30 <b>Depth to Groundwater (ft):</b> >55 <b>Plugging Date:</b> 3/10/2022			<b>Drilling Company:</b> Ready Drill, Inc. <b>Driller:</b> Ready Drill, Inc. <b>Drilling Method:</b> Auger <b>Logged By:</b> L. Crenshaw <b>Drafted By:</b> B. Arguijo <b>Draft Date:</b> 3/18/2022		
<b>Completion:</b> N/A			<b>Casing:</b> N/A			<b>Screen:</b> N/A		
<b>Comments:</b> N/A								
Depth (ft)	Groundwater	Lithology	Material Description	Chloride Field Test	Lab Result	PID Reading	Well Construction	
5			Excavation					Excavation
5			Caliche rock	>2,464	4,480	-		<div style="border: 1px solid black; width: 100%; height: 100%; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> Open hole. No casing installed
				>2,464	4,960	-		
10			Caliche - clay mix	>2,464	4,000	-		
15			Clay	1,816	3,160	-		
20			Sand, clay	596	1,060	-		
25				<116	32.0	-		
30			Notes: Lines between material types represent approximate boundaries. Actual transitions may be gradual.					
35								
40								
45								
50								
55								

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



## Soil Boring/Temporary Monitor Well B.H. #2

<b>Company:</b> Mewbourne Oil Company			<b>Well/Borehole ID:</b> B.H. #2	<b>Drilling Company:</b> Ready Drill, Inc.			
<b>Site:</b> PWMS Derringer to VF Line			<b>Coordinates (NAD 83):</b> 32.628935,-104.122171	<b>Driller:</b> Ready Drill, Inc.			
<b>NMOCD Reference #:</b> nAPP2134428244			<b>Drilling Date:</b> 3/10/2022	<b>Drilling Method:</b> Auger			
<b>Location:</b> Eddy Co., NM			<b>Depth of Boring (ft):</b> 45	<b>Logged By:</b> L. Crenshaw			
<b>PLSS:</b> U/L "M", Sec. 25, T19S, R28E			<b>Depth to Groundwater (ft):</b> >55	<b>Drafted By:</b> B. Arguijo			
			<b>Plugging Date:</b> 3/10/2022	<b>Draft Date:</b> 3/18/2022			
<b>Completion:</b> N/A			<b>Casing:</b> N/A	<b>Screen:</b> N/A			
<b>Comments:</b> N/A							
Depth (ft)	Groundwater	Lithology	Material Description	Chloride Field Test	Lab Result	PID Reading	Well Construction
			Excavation				
5			Caliche rock	>2,464	10,200	-	
				>2,464	3,440	-	
10			Caliche - clay mix	>2,464	8,530	-	
15			Clay	>2,464	7,730	-	
20			Sand, clay	>2,464	5,120	-	
25				1,888	2,480	-	
30			Sand	592	496	-	
35				570	160	-	
40				404	128	-	
45			Notes: Lines between material types represent approximate boundaries. Actual transitions may be gradual.				
50							
55							

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





## Soil Boring/Temporary Monitor Well B.H. #3


<b>Company:</b> Mewbourne Oil Company			<b>Well/Borehole ID:</b> B.H. #3		<b>Drilling Company:</b> Ready Drill, Inc.		
<b>Site:</b> PWMS Derringer to VF Line			<b>Coordinates (NAD 83):</b> 32.628491,-104.122265		<b>Driller:</b> Ready Drill, Inc.		
<b>NMOCD Reference #:</b> nAPP2134428244			<b>Drilling Date:</b> 3/10/2022		<b>Drilling Method:</b> Auger		
<b>Location:</b> Eddy Co., NM			<b>Depth of Boring (ft):</b> 35		<b>Logged By:</b> L. Crenshaw		
<b>PLSS:</b> U/L "M", Sec. 25, T19S, R28E			<b>Depth to Groundwater (ft):</b> >55		<b>Drafted By:</b> B. Arguijo		
			<b>Plugging Date:</b> 3/10/2022		<b>Draft Date:</b> 3/18/2022		
<b>Completion:</b> N/A			<b>Casing:</b> N/A		<b>Screen:</b> N/A		
<b>Comments:</b> N/A							
Depth (ft)	Groundwater	Lithology	Material Description	Chloride Field Test	Lab Result	PID Reading	Well Construction
			Excavation				
5			Caliche rock	>2,464	6,240	-	
				2,090	2,160	-	
10			Caliche - clay mix	1,760	2,400	-	
15			Clay	404	240	-	
20			Sand, clay	540	560	-	
25				444	256	-	
30			Sand	404	288	-	
35			Notes: Lines between material types represent approximate boundaries. Actual transitions may be gradual.				
40							
45							
50							
55							


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

## **Appendix C**


### **Photographic Log**


## Photographic Log

<b>Photo Number:</b> 1		
<b>Date:</b> 11/29/2021		
<b>Photo Direction:</b> Northeast		
<b>Coordinates:</b> 32.628615,-104.122338		
<b>Photo Description:</b>		
View of the affected area.		


<b>Photo Number:</b> 2		
<b>Date:</b> 11/29/2021		
<b>Photo Direction:</b> East		
<b>Coordinates:</b> 32.628615,-104.122338		
<b>Photo Description:</b>		
View of the affected area.		


## Photographic Log

<b>Photo Number:</b> 3	
<b>Date:</b> 11/29/2021	
<b>Photo Direction:</b> South	
<b>Coordinates:</b> 32.628495,-104.121933	
<b>Photo Description:</b>  View of the affected area.	

<b>Photo Number:</b> 4	
<b>Date:</b> 11/29/2021	
<b>Photo Direction:</b> North	
<b>Coordinates:</b> 32.628495,-104.121933	
<b>Photo Description:</b>  View of the affected area.	

## Photographic Log

<b>Photo Number:</b> 5	
<b>Date:</b> 1/26/2022	
<b>Photo Direction:</b> North	
<b>Coordinates:</b> 32.628356,-104.122397	
<b>Photo Description:</b>	
View of the excavated area.	

<b>Photo Number:</b> 6	
<b>Date:</b> 1/26/2022	
<b>Photo Direction:</b> Northeast	
<b>Coordinates:</b> 32.628356,-104.122397	
<b>Photo Description:</b>	
View of the excavated area.	





## Photographic Log

<b>Photo Number:</b> 7	
<b>Date:</b> 1/26/2022	
<b>Photo Direction:</b> East	
<b>Coordinates:</b> 32.628356,-104.122397	
<b>Photo Description:</b>	
View of the excavated area.	

<b>Photo Number:</b> 8	
<b>Date:</b> 2/1/2022	
<b>Photo Direction:</b> South	
<b>Coordinates:</b> 32.628198,-104.121886	
<b>Photo Description:</b>	
View of the excavated area.	

## Photographic Log


<b>Photo Number:</b> 9	<div>Feb 15, 2022 at 8:51:27 AM +32.627938,-104.121996</div> 
<b>Date:</b> 2/15/2022	
<b>Photo Direction:</b> South	
<b>Coordinates:</b> 32.627938,-104.121996	
<b>Photo Description:</b>	
View of liner installation.	

<b>Photo Number:</b> 10	<div>Feb 15, 2022 at 8:54:22 AM +32.627713,-104.122067</div> 
<b>Date:</b> 2/15/2022	
<b>Photo Direction:</b> East	
<b>Coordinates:</b> 32.627713,-104.122067	
<b>Photo Description:</b>	
View of liner installation.	




## Photographic Log

<b>Photo Number:</b> 11	 <p>Feb 15, 2022 at 1:40:26 PM Buckskin Rd Carlsbad NM 88220 United States</p>
<b>Date:</b> 2/15/2022	
<b>Photo Direction:</b> South-Southwest	
<b>Coordinates:</b> 32.628290,-104.121864	
<b>Photo Description:</b>	
View of liner installation.	

<b>Photo Number:</b> 12	 <p>Feb 15, 2022 at 1:40:08 PM Buckskin Rd Carlsbad NM 88220 United States</p>
<b>Date:</b> 2/15/2022	
<b>Photo Direction:</b> Southwest	
<b>Coordinates:</b> 32.628381,-104.121855	
<b>Photo Description:</b>	
View of liner installation.	




## Photographic Log


<b>Photo Number:</b> 13	<div>Feb 15, 2022 at 1:39:55 PM Buckskin Rd Carlsbad NM 88220 United States</div> 
<b>Date:</b> 2/15/2022	
<b>Photo Direction:</b> Southeast	
<b>Coordinates:</b> 32.627829,-104.122122	
<b>Photo Description:</b>	
View of liner installation.	

<b>Photo Number:</b> 14	<div>Mar 10, 2022 at 9:29:02 AM +32.627729,-104.121938</div> 
<b>Date:</b> 3/10/2022	
<b>Photo Direction:</b> Southeast	
<b>Coordinates:</b> 32.627729,-104.121938	
<b>Photo Description:</b>	
View of the advancement of borehole B.H. #1.	





## Photographic Log

<b>Photo Number:</b> 15	 <p>Mar 10, 2022 at 10:05:43 AM +32.628920,-104.122253</p>
<b>Date:</b> 3/10/2022	
<b>Photo Direction:</b> East	
<b>Coordinates:</b> 32.628920,-104.122253	
<b>Photo Description:</b>	
View of the advancement of borehole B.H. #2.	

<b>Photo Number:</b> 16	 <p>3/17/22, 10:26 AM +32.628215,-104.122303 NM, Carlsbad, Buckskin Rd</p>
<b>Date:</b> 3/17/2022	
<b>Photo Direction:</b> Northeast	
<b>Coordinates:</b> 32.628495,-104.121933	
<b>Photo Description:</b>	
View of liner repair activities.	

## Photographic Log

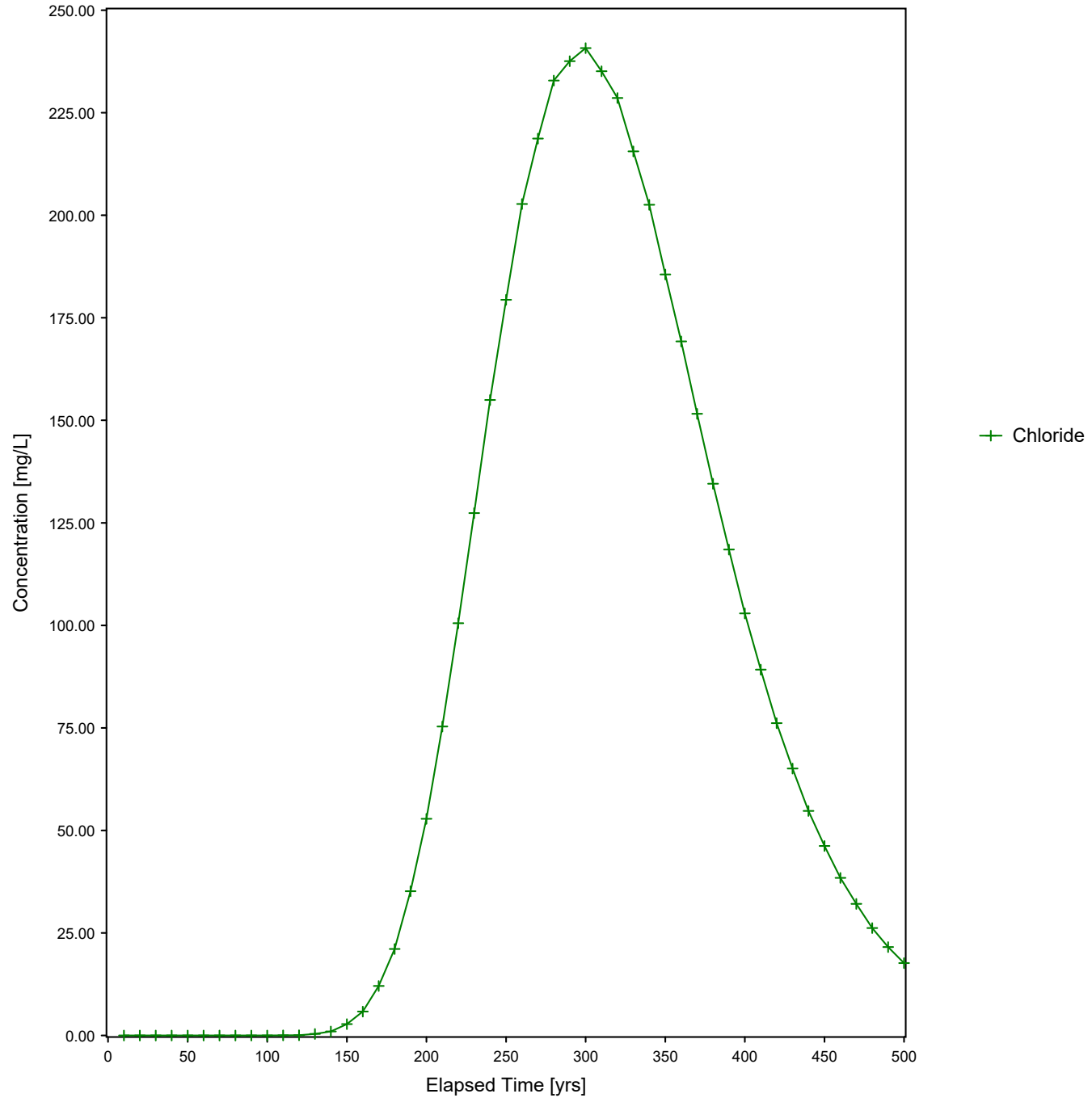
<b>Photo Number:</b> 17	
<b>Date:</b> 3/17/2022	
<b>Photo Direction:</b> North	
<b>Coordinates:</b> 32.628920,-104.122253	
<b>Photo Description:</b>	
View of liner repair activities.	

<b>Photo Number:</b> 18	
<b>Date:</b> 3/17/2022	
<b>Photo Direction:</b> Northwest	
<b>Coordinates:</b> 32.628495,-104.121933	
<b>Photo Description:</b>	
View of repaired liner.	

**Appendix D**  
**Multimedia Exposure Assessment Model**  
**(MULTIMED)**

# Chloride Concentration At The Receptor Well (w/ Liner)

Mewbourne Oil Company  
PWMS Derringer to VF Line





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

1  
Run options  
-----

Mt. Airborne Oil Company  
FMS Derringer to VF 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

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 3  
KPROP - Van Genuchten or Brooks and Corey 1  
IMSHGN - Spatial discretization option 1  
NVFLAYR - Number of layers in flow model 3

OPTIONS CHOSEN  
-----  
Van Genuchten functional coefficients  
User defined coordinate system

1

Layer information  
-----

LAYER NO.	LAYER THICKNESS	MATERIAL PROPERTY
1	2.90	1
2	2.13	1
3	3.96	1

Released to Imaging: 3/22/2022 1:48:21 PM

Received by OCD: 3/21/2022 3:50:41 PM

DATA FOR MATERIAL 1  
-----  
VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	3.60	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.250	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.700	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	8.99	0.000	0.000	0.000

DATA FOR MATERIAL 1  
-----  
VADOSE ZONE FUNCTION VARIABLES

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

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	0.140	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.120	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.700	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	8.99	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	0.116	-999.	-999.	-999.

OPTIONS CHOSEN

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

Brook and Corey exponent,EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-02	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.09	-999.	-999.	-999.

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	0.848E-03	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.150	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.700	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	8.99	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	0.116	-999.	-999.	-999.
Brook and Corey exponent,EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-03	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.09	-999.	-999.	-999.

UNSATURATED ZONE TRANSPORT MODEL PARAMETERS

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

## DATA FOR LAYER 1

## VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Thickness of layer	m	CONSTANT	8.99	-999.	-999.	-999.
Longitudinal dispersivity of layer	m	DERIVED	-999.	-999.	-999.	-999.
Percent organic matter	--	CONSTANT	0.000	-999.	-999.	-999.
Bulk density of soil for layer	g/cc	CONSTANT	1.99	-999.	-999.	-999.
Biological decay coefficient	1/yr	CONSTANT	0.000	-999.	-999.	-999.

## CHEMICAL SPECIFIC VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Solid phase decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Dissolved phase decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Overall chemical decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Acid catalyzed hydrolysis rate	1/M-yr	CONSTANT	0.000	-999.	-999.	-999.
Neutral hydrolysis rate constant	1/yr	CONSTANT	0.000	-999.	-999.	-999.
Base catalyzed hydrolysis rate	1/M-yr	CONSTANT	0.000	-999.	-999.	-999.
Reference temperature	C	CONSTANT	25.0	-999.	-999.	-999.
Normalized distribution coefficient	ml/g	CONSTANT	0.000	-999.	-999.	-999.
Distribution coefficient	--	DERIVED	-999.	-999.	-999.	-999.
Biodegradation coefficient (sat. zone)	1/yr	CONSTANT	0.000	-999.	-999.	-999.
Air diffusion coefficient	cm <sup>2</sup> /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 <sup>3</sup> /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 <sup>2</sup>	CONSTANT	0.875E+04	-999.	-999.	-999.
Duration of pulse	yr	DERIVED	0.100E-08	-999.	-999.	-999.
Spread of contaminant source	m	DERIVED	-999.	-999.	-999.	-999.



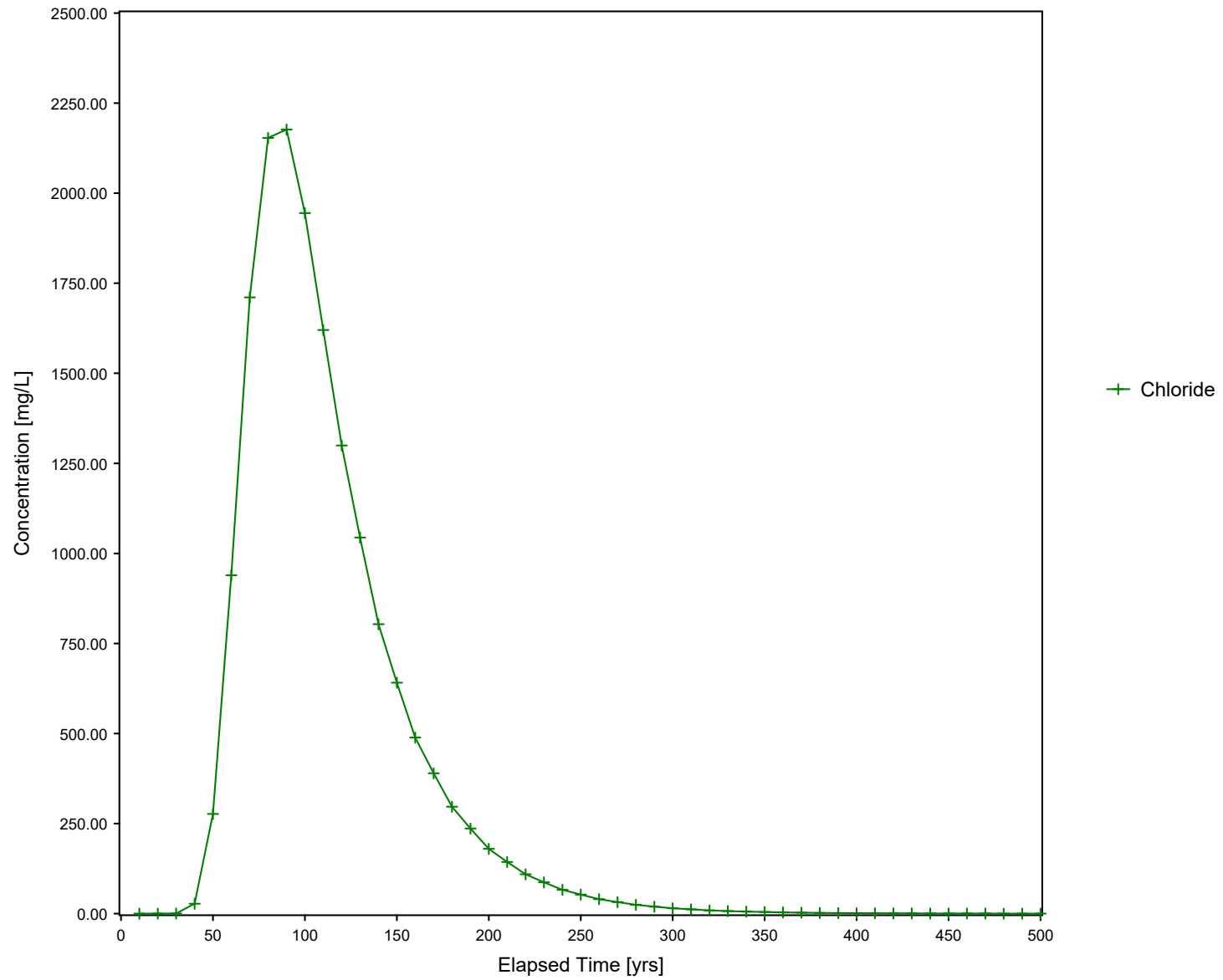
Recharge rate	m/yr	CONSTANT	0.000	-999.	-999.	-999.
Source decay constant	1/yr	CONSTANT	0.250E-01	0.000	0.000	0.000
Initial concentration at landfill	mg/l	CONSTANT	0.265E+04	-999.	-999.	-999.
Length scale of facility	m	DERIVED	-999.	-999.	-999.	-999.
Width scale of facility	m	DERIVED	-999.	-999.	-999.	-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	4.57	-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 241.0 AT 301 YEARS

**Chloride Concentration At The Receptor Well (No Liner)**  
Mewbourne Oil Company  
PWMS Derringer to VF Line



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

Run options  
-----

Mt. Airborne Oil Company  
FMS Derringer to VF 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

UNSATURATED ZONE FLOW MODEL PARAMETERS  
(input parameter description and value)  
NP - Total number of nodal points 240  
NMAT - Number of different porous materials 3  
KPROP - Van Genuchten or Brooks and Corey 1  
IMSHGN - Spatial discretization option 1  
NVFLAYR - Number of layers in flow model 3

OPTIONS CHOSEN  
-----  
Van Genuchten functional coefficients  
User defined coordinate system

Layer information  
-----

LAYER NO.	LAYER THICKNESS	MATERIAL PROPERTY
1	2.90	1
2	2.13	1
3	3.96	1

DATA FOR MATERIAL 1  
-----  
VADOSE ZONE MATERIAL VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Saturated hydraulic conductivity	cm/hr	CONSTANT	3.60	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.250	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.700	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	8.99	0.000	0.000	0.000

DATA FOR MATERIAL 1  
-----  
VADOSE ZONE FUNCTION VARIABLES

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

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	0.140	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.120	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.700	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	8.99	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	0.116	-999.	-999.	-999.



Brook and Corey exponent,EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-02	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.09	-999.	-999.	-999.

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	0.848E-03	-999.	-999.	-999.
Unsaturated zone porosity	--	CONSTANT	0.150	-999.	-999.	-999.
Air entry pressure head	m	CONSTANT	0.700	-999.	-999.	-999.
Depth of the unsaturated zone	m	CONSTANT	8.99	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	0.116	-999.	-999.	-999.
Brook and Corey exponent,EN	--	CONSTANT	-999.	-999.	-999.	-999.
ALFA coefficient	1/cm	CONSTANT	0.500E-03	-999.	-999.	-999.
Van Genuchten exponent, ENN	--	CONSTANT	1.09	-999.	-999.	-999.

1

UNSATURATED ZONE TRANSPORT MODEL PARAMETERS

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

OPTIONS CHOSEN  
-----

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

## DATA FOR LAYER 1

## VADOSE TRANSPORT VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Thickness of layer	m	CONSTANT	8.99	-999.	-999.	-999.
Longitudinal dispersivity of layer	m	DERIVED	-999.	-999.	-999.	-999.
Percent organic matter	--	CONSTANT	0.000	-999.	-999.	-999.
Bulk density of soil for layer	g/cc	CONSTANT	1.99	-999.	-999.	-999.
Biological decay coefficient	1/yr	CONSTANT	0.000	-999.	-999.	-999.

## CHEMICAL SPECIFIC VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Solid phase decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Dissolved phase decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Overall chemical decay coefficient	1/yr	DERIVED	-999.	-999.	-999.	-999.
Acid catalyzed hydrolysis rate	1/M-yr	CONSTANT	0.000	-999.	-999.	-999.
Neutral hydrolysis rate constant	1/yr	CONSTANT	0.000	-999.	-999.	-999.
Base catalyzed hydrolysis rate	1/M-yr	CONSTANT	0.000	-999.	-999.	-999.
Reference temperature	C	CONSTANT	25.0	-999.	-999.	-999.
Normalized distribution coefficient	ml/g	CONSTANT	0.000	-999.	-999.	-999.
Distribution coefficient	--	DERIVED	-999.	-999.	-999.	-999.
Biodegradation coefficient (sat. zone)	1/yr	CONSTANT	0.000	-999.	-999.	-999.
Air diffusion coefficient	cm <sup>2</sup> /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 <sup>3</sup> /M	CONSTANT	-999.	-999.	-999.	-999.
Overall 1st order decay sat. zone	1/yr	DERIVED	0.000	0.000	0.000	1.00
Not currently used		CONSTANT	0.000	0.000	0.000	0.000
Not currently used		CONSTANT	0.000	0.000	0.000	0.000

## SOURCE SPECIFIC VARIABLES

VARIABLE NAME	UNITS	DISTRIBUTION	PARAMETERS		LIMITS	
			MEAN	STD DEV	MIN	MAX
Infiltration rate	m/yr	CONSTANT	0.305E-01	-999.	-999.	-999.
Area of waste disposal unit	m <sup>2</sup>	CONSTANT	0.875E+04	-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	0.265E+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	4.57	-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 2211. AT 85.2 YEARS  
\*\*\* WARNING \*\*\* Near field mixing factor is greater than 1.  
Mixing factor = 1.58

## **Appendix E**

### **Laboratory Analytical Reports**



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

---

December 16, 2021

JOHN FARRELL

TRINITY OILFIELD SERVICES & RENTALS, LLC

P. O. BOX 2587

HOBBS, NM 88241

RE: WINCHESTER 36 AD STATE 1H

Enclosed are the results of analyses for samples received by the laboratory on 12/13/21 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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".

Celey D. Keene

Lab Director/Quality Manager





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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received:	12/13/2021	Sampling Date:	12/09/2021
Reported:	12/16/2021	Sampling Type:	Soil
Project Name:	WINCHESTER 36 AD STATE 1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO NM		

**Sample ID: PD - 1 VERTICAL @ 4' (H213589-01)**

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.82	91.1	2.00	8.15		
Toluene*	<0.050	0.050	12/14/2021	ND	1.92	96.0	2.00	7.14		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	4.28		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	6.42	107	6.00	4.73		
Total BTEX	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5680	16.0	12/14/2021	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/14/2021	ND	188	94.0	200	0.890	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	190	94.9	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 101 % 44.3-133

Surrogate: 1-Chlorooctadecane 94.3 % 38.9-142

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 2 VERTICAL @ 4' (H213589-02)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.82	91.1	2.00	8.15		
Toluene*	<0.050	0.050	12/14/2021	ND	1.92	96.0	2.00	7.14		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	4.28		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	6.42	107	6.00	4.73		
Total BTX	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5200	16.0	12/14/2021	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/14/2021	ND	188	94.0	200	0.890	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	190	94.9	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 99.0 % 44.3-133

Surrogate: 1-Chlorooctadecane 93.3 % 38.9-142

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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:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 3 VERTICAL @ 4' (H213589-03)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.82	91.1	2.00	8.15		
Toluene*	<0.050	0.050	12/14/2021	ND	1.92	96.0	2.00	7.14		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	4.28		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	6.42	107	6.00	4.73		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/14/2021	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	12/14/2021	ND	188	94.0	200	0.890	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	190	94.9	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 105 % 44.3-133

Surrogate: 1-Chlorooctadecane 98.6 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 4 VERTICAL @ 4' (H213589-04)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.82	91.1	2.00	8.15		
Toluene*	<0.050	0.050	12/14/2021	ND	1.92	96.0	2.00	7.14		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	4.28		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	6.42	107	6.00	4.73		
Total BTX	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6320	16.0	12/14/2021	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	12/14/2021	ND	188	94.0	200	0.890	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	190	94.9	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 100 % 44.3-133

Surrogate: 1-Chlorooctadecane 94.0 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 5 VERTICAL @ 4' (H213589-05)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.6 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5200	16.0	12/14/2021	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	12/14/2021	ND	188	94.0	200	0.890	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	190	94.9	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-133

Surrogate: 1-Chlorooctadecane 97.6 % 38.9-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 6 VERTICAL @ 4' (H213589-06)**

BTX 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03	
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58	
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10	
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79	
Total BTX	<0.300	0.300	12/14/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5120	16.0	12/14/2021	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	12/14/2021	ND	188	94.0	200	0.890	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	190	94.9	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 105 % 44.3-133

Surrogate: 1-Chlorooctadecane 98.9 % 38.9-142

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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:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 7 VERTICAL @ 4' (H213589-07)**

BTX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTX	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.4 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4800	16.0	12/14/2021	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	12/14/2021	ND	188	94.0	200	0.890	
DRO >C10-C28*	47.7	10.0	12/14/2021	ND	190	94.9	200	2.92	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 103 % 44.3-133

Surrogate: 1-Chlorooctadecane 99.6 % 38.9-142

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:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 8 VERTICAL @ 4' (H213589-08)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5440	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 97.6 % 44.3-133

Surrogate: 1-Chlorooctadecane 94.9 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 9 VERTICAL @ 4' (H213589-09)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.5 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6080	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 97.2 % 44.3-133

Surrogate: 1-Chlorooctadecane 91.5 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 10 VERTICAL @ 4' (H213589-10)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.9 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6560	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 103 % 44.3-133

Surrogate: 1-Chlorooctadecane 96.4 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 11 VERTICAL @ 4' (H213589-11)**

BTEx 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03	
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58	
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10	
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79	
Total BTEx	<0.300	0.300	12/14/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.2 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3400	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 104 % 44.3-133

Surrogate: 1-Chlorooctadecane 98.2 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 12 VERTICAL @ 4' (H213589-12)**

BTX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTX	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.3 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5680	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 91.6 % 44.3-133

Surrogate: 1-Chlorooctadecane 86.6 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 13 VERTICAL @ 4' (H213589-13)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEX	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.7 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4800	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 95.6 % 44.3-133

Surrogate: 1-Chlorooctadecane 90.5 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 14 VERTICAL @ 4' (H213589-14)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.3 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4800	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 97.5 % 44.3-133

Surrogate: 1-Chlorooctadecane 92.9 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 15 VERTICAL @ 4' (H213589-15)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	800	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 90.5 % 44.3-133

Surrogate: 1-Chlorooctadecane 85.7 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 16 VERTICAL @ 4' (H213589-16)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.3 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2880	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 96.5 % 44.3-133

Surrogate: 1-Chlorooctadecane 91.4 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received:	12/13/2021	Sampling Date:	12/09/2021
Reported:	12/16/2021	Sampling Type:	Soil
Project Name:	WINCHESTER 36 AD STATE 1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO NM		

**Sample ID: PD - 17 VERTICAL @ 4' (H213589-17)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3160	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	13.8	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 105 % 44.3-133

Surrogate: 1-Chlorooctadecane 99.7 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 18 VERTICAL @ 4' (H213589-18)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.3 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	6400	16.0	12/14/2021	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	12/14/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 101 % 44.3-133

Surrogate: 1-Chlorooctadecane 95.4 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 19 VERTICAL @ 4' (H213589-19)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.1 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5200	16.0	12/14/2021	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	12/15/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/15/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/15/2021	ND					

Surrogate: 1-Chlorooctane 96.7 % 44.3-133

Surrogate: 1-Chlorooctadecane 91.6 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 20 VERTICAL @ 4' (H213589-20)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3800	16.0	12/14/2021	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	12/15/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/15/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/15/2021	ND					

Surrogate: 1-Chlorooctane 98.0 % 44.3-133

Surrogate: 1-Chlorooctadecane 95.2 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 21 VERTICAL @ 4' (H213589-21)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3760	16.0	12/14/2021	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	12/15/2021	ND	203	102	200	0.750	
DRO >C10-C28*	20.6	10.0	12/15/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/15/2021	ND					

Surrogate: 1-Chlorooctane 93.7 % 44.3-133

Surrogate: 1-Chlorooctadecane 92.3 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 22 VERTICAL @ 4' (H213589-22)**

BTEx 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03	
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58	
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10	
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79	
Total BTEx	<0.300	0.300	12/14/2021	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/14/2021	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	12/15/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/15/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/15/2021	ND					

Surrogate: 1-Chlorooctane 83.4 % 44.3-133

Surrogate: 1-Chlorooctadecane 80.2 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 23 VERTICAL @ 4' (H213589-23)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.6 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	752	16.0	12/14/2021	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	12/15/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/15/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/15/2021	ND					

Surrogate: 1-Chlorooctane 89.3 % 44.3-133

Surrogate: 1-Chlorooctadecane 85.8 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 24 VERTICAL @ 4' (H213589-24)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2021	ND	1.98	99.0	2.00	7.03		
Toluene*	<0.050	0.050	12/14/2021	ND	1.88	94.0	2.00	6.58		
Ethylbenzene*	<0.050	0.050	12/14/2021	ND	1.90	94.8	2.00	6.10		
Total Xylenes*	<0.150	0.150	12/14/2021	ND	5.90	98.3	6.00	5.79		
Total BTEx	<0.300	0.300	12/14/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.0 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/14/2021	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	12/15/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/15/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/15/2021	ND					

Surrogate: 1-Chlorooctane 98.2 % 44.3-133

Surrogate: 1-Chlorooctadecane 94.2 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 25 VERTICAL @ 4' (H213589-25)**

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	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTEx	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/14/2021	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	12/15/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/15/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/15/2021	ND					

Surrogate: 1-Chlorooctane 89.4 % 44.3-133

Surrogate: 1-Chlorooctadecane 84.0 % 38.9-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 26 VERTICAL @ 4' (H213589-26)**

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	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTEx	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5440	16.0	12/14/2021	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	12/15/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/15/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/15/2021	ND					

Surrogate: 1-Chlorooctane 97.9 % 44.3-133

Surrogate: 1-Chlorooctadecane 92.6 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 27 VERTICAL @ 4' (H213589-27)**

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	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTEx	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3600	16.0	12/14/2021	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	12/15/2021	ND	203	102	200	0.750	
DRO >C10-C28*	<10.0	10.0	12/15/2021	ND	206	103	200	0.149	
EXT DRO >C28-C36	<10.0	10.0	12/15/2021	ND					

Surrogate: 1-Chlorooctane 96.6 % 44.3-133

Surrogate: 1-Chlorooctadecane 92.8 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BACKGROUND - N @ 0 SURFACE (H213589-28)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTX	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 75.3 % 44.3-133

Surrogate: 1-Chlorooctadecane 74.5 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BACKGROUND - N @ 2' (H213589-29)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTX	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 90.4 % 44.3-133

Surrogate: 1-Chlorooctadecane 91.6 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BACKGROUND - N @ 4' (H213589-30)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTX	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 82.7 % 44.3-133

Surrogate: 1-Chlorooctadecane 83.1 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BACKGROUND - E @ 0 SURFACE (H213589-31)**

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	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTEX	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 89.7 % 44.3-133

Surrogate: 1-Chlorooctadecane 91.4 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received:	12/13/2021	Sampling Date:	12/09/2021
Reported:	12/16/2021	Sampling Type:	Soil
Project Name:	WINCHESTER 36 AD STATE 1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO NM		

**Sample ID: BACKGROUND - E @ 2' (H213589-32)**

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	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTEx	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 82.1 % 44.3-133

Surrogate: 1-Chlorooctadecane 82.2 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received:	12/13/2021	Sampling Date:	12/09/2021
Reported:	12/16/2021	Sampling Type:	Soil
Project Name:	WINCHESTER 36 AD STATE 1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO NM		

**Sample ID: BACKGROUND - E @ 4' (H213589-33)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTX	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 79.1 % 44.3-133

Surrogate: 1-Chlorooctadecane 78.2 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BACKGROUND - W @ 0 SURFACE (H213589-34)**

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	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTEx	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 76.1 % 44.3-133

Surrogate: 1-Chlorooctadecane 75.0 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BACKGROUND - W @ 2' (H213589-35)**

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	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTEx	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 88.0 % 44.3-133

Surrogate: 1-Chlorooctadecane 89.1 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received:	12/13/2021	Sampling Date:	12/09/2021
Reported:	12/16/2021	Sampling Type:	Soil
Project Name:	WINCHESTER 36 AD STATE 1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO NM		

**Sample ID: BACKGROUND - W @ 4' (H213589-36)**

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	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTEx	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 84.3 % 44.3-133

Surrogate: 1-Chlorooctadecane 83.9 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BACKGROUND - S @ 0 SURFACE (H213589-37)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTX	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 89.9 % 44.3-133

Surrogate: 1-Chlorooctadecane 89.1 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BACKGROUND - S @ 2' (H213589-38)**

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	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTEx	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 80.4 % 44.3-133

Surrogate: 1-Chlorooctadecane 80.3 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/09/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BACKGROUND - S @ 4' (H213589-39)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/15/2021	ND	1.81	90.5	2.00	9.39		
Toluene*	<0.050	0.050	12/15/2021	ND	1.95	97.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	12/15/2021	ND	2.00	99.9	2.00	7.40		
Total Xylenes*	<0.150	0.150	12/15/2021	ND	6.77	113	6.00	6.81		
Total BTX	<0.300	0.300	12/15/2021	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/14/2021	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	12/14/2021	ND	202	101	200	9.49	
DRO >C10-C28*	<10.0	10.0	12/14/2021	ND	203	102	200	7.54	
EXT DRO >C28-C36	<10.0	10.0	12/14/2021	ND					

Surrogate: 1-Chlorooctane 80.5 % 44.3-133

Surrogate: 1-Chlorooctadecane 80.3 % 38.9-142

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/10/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 1 VERTICAL @ 45' (H213589-40)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/14/2021	ND	416	104	400	0.00		

**Sample ID: PD - 2 VERTICAL @ 40' (H213589-41)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/14/2021	ND	416	104	400	0.00		

**Sample ID: PD - 4 VERTICAL @ 40' (H213589-42)**

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	12/14/2021	ND	416	104	400	0.00		

**Sample ID: PD - 5 VERTICAL @ 25' (H213589-43)**

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	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 6 VERTICAL @ 20' (H213589-44)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	12/14/2021	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/10/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 7 VERTICAL @ 40' (H213589-45)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	12/14/2021	ND	400	100	400	0.00		

**Sample ID: PD - 8 VERTICAL @ 25' (H213589-46)**

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	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 9 VERTICAL @ 25' (H213589-47)**

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	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 10 VERTICAL @ 50' (H213589-48)**

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	12/14/2021	ND	400	100	400	0.00		

**Sample ID: PD - 11 VERTICAL @ 25' (H213589-49)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	12/14/2021	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/10/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 12 VERTICAL @ 25' (H213589-50)**

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	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 13 VERTICAL @ 50' (H213589-51)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 14 VERTICAL @ 50' (H213589-52)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 15 VERTICAL @ 30' (H213589-53)**

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	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 16 VERTICAL @ 16' (H213589-54)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	12/14/2021	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received: 12/13/2021  
 Reported: 12/16/2021  
 Project Name: WINCHESTER 36 AD STATE 1H  
 Project Number: NONE GIVEN  
 Project Location: MEWBOURNE - EDDY CO NM

Sampling Date: 12/10/2021  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: PD - 17 VERTICAL @ 50' (H213589-55)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 18 VERTICAL @ 40' (H213589-56)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 19 VERTICAL @ 35' (H213589-57)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 20 VERTICAL @ 50' (H213589-58)**

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	12/14/2021	ND	400	100	400	0.00	

**Sample ID: PD - 21 VERTICAL @ 30' (H213589-59)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	12/14/2021	ND	400	100	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRINITY OILFIELD SERVICES & RENTALS, LLC  
 JOHN FARRELL  
 P. O. BOX 2587  
 HOBBS NM, 88241  
 Fax To: NONE

Received:	12/13/2021	Sampling Date:	12/10/2021
Reported:	12/16/2021	Sampling Type:	Soil
Project Name:	WINCHESTER 36 AD STATE 1H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO NM		

**Sample ID: PD - 26 VERTICAL @ 20' (H213589-60)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/14/2021	ND	400	100	400	0.00		

**Sample ID: PD - 27 VERTICAL @ 30' (H213589-61)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/14/2021	ND	400	100	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager





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### Notes and Definitions

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 "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Trinity Oilfield Services						BILL TO								ANALYSIS REQUEST																									
Project Manager: John Farrell						P.O. #:																																	
Address: 8426 N Dal Paso						Company: Mewbourne Oil Co.																																	
City: Hobbs			State: NM Zip: 88241			Attn: Robbie Runnels																																	
Phone #: 575 390 7560			Fax #:			Address:																																	
Project #:			Project Owner: (see below)			City:																																	
Project Name: Winchester 36 AD State 1H john@trinityoilfieldservices.com						State: NM Zip:																																	
Project Location: Eddy Co., NM						Phone #:																																	
Sampler Name: GR						Fax #:																																	
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																													
						# CONTAINERS		GROUNDWATER		SOIL		SLUDGE		OTHER :		ACIDBASE: ICE / COOL		OTHER :		DATE		TIME																	
Lab I.D.						Sample I.D.						(GRAB OR C/COMP.)												Chloride		TPH		BTEX											
1 PD-1 Vertical @ 4'						G 1				X										12/9/2021		9:00		X		X		X											
2 PD-2 Vertical @ 4'						G 1				X										12/9/2021		9:05		X		X		X											
3 PD-3 Vertical @ 4'						G 1				X										12/9/2021		9:10		X		X		X											
4 PD-4 Vertical @ 4'						G 1				X										12/9/2021		9:15		X		X		X											
5 PD-5 Vertical @ 4'						G 1				X										12/9/2021		9:20		X		X		X											
6 PD-6 Vertical @ 4'						G 1				X										12/9/2021		9:25		X		X		X											
7 PD-7 Vertical @ 4'						G 1				X										12/9/2021		9:30		X		X		X											
8 PD-8 Vertical @ 4'						G 1				X										12/9/2021		9:35		X		X		X											
9 PD-9 Vertical @ 4'						G 1				X										12/9/2021		9:40		X		X		X											
10 PD-10 Vertical @ 4'						G 1				X										12/9/2021		9:45		X		X		X											
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Relinquished By:						Date: 12/13		Received By:		Verbal Result:		Yes		No		Add'l Phone #:																							
						Time: 5:00				All Results are emailed. Please provide Email address:																													
Relinquished By:						Date:		Received By:		REMARKS:																													
						Time:																																	
Delivered By: (Circle One)						Observed Temp. °C 30		Sample Condition:		CHECKED BY:		Turnaround Time:		Standard X		Bacteria (only) Sample Condition																							
Sampler - UPS - Bus - Other:						Corrected Temp. °C 25		Cool Intact Yes No		(Initials) TO		Thermometer ID #113		Rush		Cool Intact Observed Temp. °C																							
								Yes No				Correction Factor -0.5 °C				Yes No Corrected Temp. °C																							

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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Released to Imaging: 3/22/2022 1:38:21 PM

Released to Imaging: 3/22/2022 1:38:21 PM





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

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Trinity Oilfield Services			<b>BILL TO</b>			<b>ANALYSIS REQUEST</b>																
Project Manager: John Farrell			P.O. #:																			
Address: 8426 N Dal Paso			Company: Mawbourne Oil Co.																			
City: Hobbs		State: NM Zip: 88241	Attn: Robbie Runnels																			
Phone #: 575 390 7560		Fax #:	Address:																			
Project #:		Project Owner: (see below)		City:																		
Project Name: Winchester 36 AD State 1H		john@trinityoilfieldservices.com		State: NM Zip:																		
Project Location: Eddy Co., NM		Phone #:																				
Sampler Name: GR		Fax #:																				
FOR LAB USE ONLY			MATRIX		PRESERV.	SAMPLING																
			(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SILUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chloride	TPH	BTEX				
Lab I.D.	Sample I.D.																					
51	PD-13 Vertical @ 50'		G	1			X							12/10/2021	9:55	X						
52	PD-14 Vertical @ 50'		G	1			X							12/10/2021	10:00	X						
53	PD-15 Vertical @ 30'		G	1			X							12/10/2021	10:05	X						
54	PD-16 Vertical @ 16'		G	1			X							12/10/2021	10:10	X						
55	PD-17 Vertical @ 50'		G	1			X							12/10/2021	10:15	X						
56	PD-18 Vertical @ 40'		G	1			X							12/10/2021	10:20	X						
57	PD-19 Vertical @ 35'		G	1			X							12/10/2021	10:25	X						
58	PD-20 Vertical @ 50'		G	1			X							12/10/2021	10:30	X						
59	PD-21 Vertical @ 30'		G	1			X							12/10/2021	10:35	X						
60	PD-26 Vertical @ 20'		G	1			X							12/10/2021	10:40	X						

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Relinquished By:	Date: 12/13	Received By:	Verbal Result:	Yes	No	Add'l Phone #:
	Time: 3:10		All Results are emailed. Please provide Email address:			
Relinquished By:	Date:	Received By:	REMARKS:			
	Time:					

Delivered By: (Circle One)	Observed Temp. °C: 3.0	Sample Condition	CHECKED BY: (Initials)	Turnaround Time:	Standard	X	Bacteria (only) Sample Condition
Sampler - UPS - Bus - Other:	Corrected Temp. °C: 25	Cool Intact			Rush		Cool Intact Observed Temp. °C
		Yes Yes					Yes Yes
		No No					No No Corrected Temp. °C

Thermometer ID #113  
Correction Factor -0.5 °C

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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

---

January 31, 2022

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: PWMS DERRINGER TO WINCHESTER LINE

Enclosed are the results of analyses for samples received by the laboratory on 01/26/22 16:22.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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".

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:	01/26/2022	Sampling Date:	01/26/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIM	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE -		

**Sample ID: NW # 1 (H220310-01)**

BTX 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/29/2022	ND	2.08	104	2.00	4.39	
Toluene*	<0.050	0.050	01/29/2022	ND	1.99	99.6	2.00	4.42	
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.97	98.7	2.00	3.77	
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.95	99.1	6.00	3.49	
Total BTX	<0.300	0.300	01/29/2022	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	01/27/2022	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 102 % 66.9-136

Surrogate: 1-Chlorooctadecane 102 % 59.5-142

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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:	01/26/2022	Sampling Date:	01/26/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE -		

**Sample ID: NW # 2 (H220310-02)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/29/2022	ND	2.08	104	2.00	4.39		
Toluene*	<0.050	0.050	01/29/2022	ND	1.99	99.6	2.00	4.42		
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.97	98.7	2.00	3.77		
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.95	99.1	6.00	3.49		
Total BTEx	<0.300	0.300	01/29/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	01/27/2022	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 108 % 66.9-136

Surrogate: 1-Chlorooctadecane 106 % 59.5-142

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:	01/26/2022	Sampling Date:	01/26/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE -		

**Sample ID: WW # 1 (H220310-03)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/29/2022	ND	2.08	104	2.00	4.39		
Toluene*	<0.050	0.050	01/29/2022	ND	1.99	99.6	2.00	4.42		
Ethylbenzene*	<0.050	0.050	01/29/2022	ND	1.97	98.7	2.00	3.77		
Total Xylenes*	<0.150	0.150	01/29/2022	ND	5.95	99.1	6.00	3.49		
Total BTEX	<0.300	0.300	01/29/2022	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	01/27/2022	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 97.5 % 66.9-136

Surrogate: 1-Chlorooctadecane 93.8 % 59.5-142

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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:	01/26/2022	Sampling Date:	01/26/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE -		

**Sample ID: WW # 2 (H220310-04)**

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	01/28/2022	ND	2.01	100	2.00	9.32		
Toluene*	<0.050	0.050	01/28/2022	ND	2.18	109	2.00	5.72		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	2.03	101	2.00	3.91		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	6.30	105	6.00	3.50		
Total BTEx	<0.300	0.300	01/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	01/27/2022	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 108 % 66.9-136

Surrogate: 1-Chlorooctadecane 105 % 59.5-142

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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:	01/26/2022	Sampling Date:	01/26/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE -		

**Sample ID: WW # 3 (H220310-05)**

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	01/28/2022	ND	2.01	100	2.00	9.32		
Toluene*	<0.050	0.050	01/28/2022	ND	2.18	109	2.00	5.72		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	2.03	101	2.00	3.91		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	6.30	105	6.00	3.50		
Total BTEx	<0.300	0.300	01/28/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	01/27/2022	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 116 % 66.9-136

Surrogate: 1-Chlorooctadecane 114 % 59.5-142

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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:	01/26/2022	Sampling Date:	01/26/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE -		

**Sample ID: EW # 1 (H220310-06)**

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	01/28/2022	ND	2.01	100	2.00	9.32		
Toluene*	<0.050	0.050	01/28/2022	ND	2.18	109	2.00	5.72		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	2.03	101	2.00	3.91		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	6.30	105	6.00	3.50		
Total BTX	<0.300	0.300	01/28/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	01/27/2022	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 103 % 66.9-136

Surrogate: 1-Chlorooctadecane 102 % 59.5-142

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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:	01/26/2022	Sampling Date:	01/26/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE -		

**Sample ID: NW # 3 (H220310-07)**

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	01/28/2022	ND	2.01	100	2.00	9.32		
Toluene*	<0.050	0.050	01/28/2022	ND	2.18	109	2.00	5.72		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	2.03	101	2.00	3.91		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	6.30	105	6.00	3.50		
Total BTEx	<0.300	0.300	01/28/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	01/27/2022	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 96.9 % 66.9-136

Surrogate: 1-Chlorooctadecane 94.7 % 59.5-142

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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:	01/26/2022	Sampling Date:	01/26/2022
Reported:	01/31/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE -		

**Sample ID: EW # 2 (H220310-08)**

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	01/28/2022	ND	2.01	100	2.00	9.32		
Toluene*	<0.050	0.050	01/28/2022	ND	2.18	109	2.00	5.72		
Ethylbenzene*	<0.050	0.050	01/28/2022	ND	2.03	101	2.00	3.91		
Total Xylenes*	<0.150	0.150	01/28/2022	ND	6.30	105	6.00	3.50		
Total BTEx	<0.300	0.300	01/28/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	01/27/2022	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/28/2022	ND	210	105	200	6.76	
DRO >C10-C28*	<10.0	10.0	01/28/2022	ND	252	126	200	3.17	
EXT DRO >C28-C36	<10.0	10.0	01/28/2022	ND					

Surrogate: 1-Chlorooctane 110 % 66.9-136

Surrogate: 1-Chlorooctadecane 107 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager

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

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### 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

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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

<b>Company Name:</b> Etech Environmental & Safety Solutions, Inc. <b>Project Manager:</b> Lance Cranshaw <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> 15345 <b>Project Owner:</b> <b>Project Name:</b> Pwms Derringer to winchester line <b>Project Location:</b> <b>Sampler Name:</b> Aaron Rios						<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>															
						<b>P.O. #:</b>  <b>Company:</b> Newbauer <b>Attn:</b> Robbie Runnels <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>																			
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV.	SAMPLING	DATE	TIME	Chloride	TPH (8015M)	BTEX (8021B)													
	H220310				GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :	ACID/BASE: ICE / COOL OTHER :																			
	1	NW # 1.	X		X	X		1-26-22		X	X	X													
	2	NW # 2.	X		X	X		1-26-22		X	X	X													
	3	WW # 1.	X		X	X		1-26-22		X	X	X													
	4	WW # 2.	X		X	X		1-26-22		X	X	X													
	5	WW # 3.	X		X	X		1-26-22		X	X	X													
	6	EW # 1.	X		X	X		1-26-22		X	X	X													
	7	NW # 3.	X		X	X		1-26-22		X	X	X													
	8	EW # 2.	X		X	X		1-26-22		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:	Received By:			Phone Result:			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Add'l Phone #:												
Aaron Rios			Time:	[Signature]			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)			2.38 C-0.50			Sample Condition:			CHECKED BY:			Please email copy of COC and results to pm@etechenv.com.													
Sampler - UPS - Bus - Other:			1.80 #113			Cool Intact			(initials)																
						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			JO																



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

---

February 04, 2022

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: PWMS DERRINGER TO WINCHESTER LINE

Enclosed are the results of analyses for samples received by the laboratory on 02/01/22 15:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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:	02/01/2022	Sampling Date:	02/01/2022
Reported:	02/04/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIM	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

**Sample ID: SW # 1 (H220387-01)**

BTX 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2022	ND	1.97	98.6	2.00	10.9	
Toluene*	<0.050	0.050	02/03/2022	ND	1.91	95.4	2.00	10.8	
Ethylbenzene*	<0.050	0.050	02/03/2022	ND	1.86	93.2	2.00	11.6	
Total Xylenes*	<0.150	0.150	02/03/2022	ND	5.62	93.7	6.00	11.6	
Total BTX	<0.300	0.300	02/03/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/03/2022	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2022	ND	219	109	200	0.879	
DRO >C10-C28*	<10.0	10.0	02/03/2022	ND	223	112	200	1.38	
EXT DRO >C28-C36	<10.0	10.0	02/03/2022	ND					

Surrogate: 1-Chlorooctane 108 % 66.9-136

Surrogate: 1-Chlorooctadecane 116 % 59.5-142

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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:	02/01/2022	Sampling Date:	02/01/2022
Reported:	02/04/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

**Sample ID: EW # 3 (H220387-02)**

BTX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/03/2022	ND	1.97	98.6	2.00	10.9		
Toluene*	<0.050	0.050	02/03/2022	ND	1.91	95.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	02/03/2022	ND	1.86	93.2	2.00	11.6		
Total Xylenes*	<0.150	0.150	02/03/2022	ND	5.62	93.7	6.00	11.6		
Total BTX	<0.300	0.300	02/03/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/03/2022	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2022	ND	219	109	200	0.879	
DRO >C10-C28*	<10.0	10.0	02/03/2022	ND	223	112	200	1.38	
EXT DRO >C28-C36	<10.0	10.0	02/03/2022	ND					

Surrogate: 1-Chlorooctane 110 % 66.9-136

Surrogate: 1-Chlorooctadecane 118 % 59.5-142

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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:	02/01/2022	Sampling Date:	02/01/2022
Reported:	02/04/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

**Sample ID: EW # 4 (H220387-03)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/03/2022	ND	1.97	98.6	2.00	10.9		
Toluene*	<0.050	0.050	02/03/2022	ND	1.91	95.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	02/03/2022	ND	1.86	93.2	2.00	11.6		
Total Xylenes*	<0.150	0.150	02/03/2022	ND	5.62	93.7	6.00	11.6		
Total BTEx	<0.300	0.300	02/03/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/03/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2022	ND	204	102	200	5.27	
DRO >C10-C28*	<10.0	10.0	02/03/2022	ND	220	110	200	5.25	
EXT DRO >C28-C36	<10.0	10.0	02/03/2022	ND					

Surrogate: 1-Chlorooctane 95.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 95.7 % 59.5-142

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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:	02/01/2022	Sampling Date:	02/01/2022
Reported:	02/04/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

**Sample ID: EW # 5 (H220387-04)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/03/2022	ND	1.97	98.6	2.00	10.9		
Toluene*	<0.050	0.050	02/03/2022	ND	1.91	95.4	2.00	10.8		
Ethylbenzene*	<0.050	0.050	02/03/2022	ND	1.86	93.2	2.00	11.6		
Total Xylenes*	<0.150	0.150	02/03/2022	ND	5.62	93.7	6.00	11.6		
Total BTEX	<0.300	0.300	02/03/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/03/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2022	ND	204	102	200	5.27	
DRO >C10-C28*	<10.0	10.0	02/03/2022	ND	220	110	200	5.25	
EXT DRO >C28-C36	<10.0	10.0	02/03/2022	ND					

Surrogate: 1-Chlorooctane 101 % 66.9-136

Surrogate: 1-Chlorooctadecane 103 % 59.5-142

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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:	02/01/2022	Sampling Date:	02/01/2022
Reported:	02/04/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

**Sample ID: WW # 4 (H220387-05)**

BTX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/03/2022	ND	1.95	97.7	2.00	4.97		
Toluene*	<0.050	0.050	02/03/2022	ND	2.08	104	2.00	0.518		
Ethylbenzene*	<0.050	0.050	02/03/2022	ND	1.92	96.2	2.00	1.03		
Total Xylenes*	<0.150	0.150	02/03/2022	ND	5.96	99.4	6.00	0.695		
Total BTX	<0.300	0.300	02/03/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/03/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2022	ND	204	102	200	5.27	
DRO >C10-C28*	<10.0	10.0	02/03/2022	ND	220	110	200	5.25	
EXT DRO >C28-C36	<10.0	10.0	02/03/2022	ND					

Surrogate: 1-Chlorooctane 91.5 % 66.9-136

Surrogate: 1-Chlorooctadecane 91.9 % 59.5-142

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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:	02/01/2022	Sampling Date:	02/01/2022
Reported:	02/04/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

**Sample ID: WW # 5 (H220387-06)**

BTEx 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/03/2022	ND	1.95	97.7	2.00	4.97		
Toluene*	<0.050	0.050	02/03/2022	ND	2.08	104	2.00	0.518		
Ethylbenzene*	<0.050	0.050	02/03/2022	ND	1.92	96.2	2.00	1.03		
Total Xylenes*	<0.150	0.150	02/03/2022	ND	5.96	99.4	6.00	0.695		
Total BTEx	<0.300	0.300	02/03/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/03/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2022	ND	204	102	200	5.27	
DRO >C10-C28*	<10.0	10.0	02/03/2022	ND	220	110	200	5.25	
EXT DRO >C28-C36	<10.0	10.0	02/03/2022	ND					

Surrogate: 1-Chlorooctane 95.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 95.6 % 59.5-142

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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:	02/01/2022	Sampling Date:	02/01/2022
Reported:	02/04/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

**Sample ID: SW # 2 (H220387-07)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2022	ND	1.95	97.7	2.00	4.97	
Toluene*	<0.050	0.050	02/03/2022	ND	2.08	104	2.00	0.518	
Ethylbenzene*	<0.050	0.050	02/03/2022	ND	1.92	96.2	2.00	1.03	
Total Xylenes*	<0.150	0.150	02/03/2022	ND	5.96	99.4	6.00	0.695	
Total BTX	<0.300	0.300	02/03/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	02/03/2022	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2022	ND	204	102	200	5.27	
DRO >C10-C28*	<10.0	10.0	02/03/2022	ND	220	110	200	5.25	
EXT DRO >C28-C36	<10.0	10.0	02/03/2022	ND					

Surrogate: 1-Chlorooctane 94.9 % 66.9-136

Surrogate: 1-Chlorooctadecane 95.8 % 59.5-142

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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:	02/01/2022	Sampling Date:	02/01/2022
Reported:	02/04/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

**Sample ID: SW # 3 (H220387-08)**

BTX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2022	ND	1.95	97.7	2.00	4.97	
Toluene*	<0.050	0.050	02/03/2022	ND	2.08	104	2.00	0.518	
Ethylbenzene*	<0.050	0.050	02/03/2022	ND	1.92	96.2	2.00	1.03	
Total Xylenes*	<0.150	0.150	02/03/2022	ND	5.96	99.4	6.00	0.695	
Total BTX	<0.300	0.300	02/03/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/03/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2022	ND	204	102	200	5.27	
DRO >C10-C28*	<10.0	10.0	02/03/2022	ND	220	110	200	5.25	
EXT DRO >C28-C36	<10.0	10.0	02/03/2022	ND					

Surrogate: 1-Chlorooctane 97.3 % 66.9-136

Surrogate: 1-Chlorooctadecane 98.4 % 59.5-142

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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:	02/01/2022	Sampling Date:	02/01/2022
Reported:	02/04/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

**Sample ID: SW # 4 (H220387-09)**

BTEx 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/03/2022	ND	1.95	97.7	2.00	4.97	
Toluene*	<0.050	0.050	02/03/2022	ND	2.08	104	2.00	0.518	
Ethylbenzene*	<0.050	0.050	02/03/2022	ND	1.92	96.2	2.00	1.03	
Total Xylenes*	<0.150	0.150	02/03/2022	ND	5.96	99.4	6.00	0.695	
Total BTEx	<0.300	0.300	02/03/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/03/2022	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2022	ND	204	102	200	5.27	
DRO >C10-C28*	<10.0	10.0	02/03/2022	ND	220	110	200	5.25	
EXT DRO >C28-C36	<10.0	10.0	02/03/2022	ND					

Surrogate: 1-Chlorooctane 91.5 % 66.9-136

Surrogate: 1-Chlorooctadecane 92.4 % 59.5-142

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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.
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", written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



**• ARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.				BILL TO				ANALYSIS REQUEST																			
Project Manager: Lance Crumshaw				P.O. #:				Chloride TPH (8015M) BTEX (8021B)																			
Address: P.O. Box 301				Company: Mewboure																							
City: Lovington		State: NM		Zip: 88260		Attn: Robbie Runnels																					
Phone #: (575) 396-2378		Fax #: (575) 396-1429		Address:																							
Project #: 15345		Project Owner:		City:																							
Project Name: Pumps Derringer To Winchester Line				State:				Zip:																			
Project Location:				Phone #:																							
Sampler Name: Aaron Kios				Fax #:																							
R 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			
#220387																											
1 SW #1.				X				X				2-1-22				X X X											
2 EW #3.				X				X				2-1-22				X X X											
3 EW #4.				X				X				2-1-22				X X X											
4 EW #5.				X				X				2-1-22				X X X											
5 WW #4.				X				X				2-1-22				X X X											
6 WW #5.				X				X				2-1-22				X X X											
7 SW #2.				X				X				2-1-22				X X X											
8 SW #3.				X				X				2-1-22				X X X											
9 SW #4.				X				X				2-1-22				X X X											
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Relinquished By: Aaron Kios				Date: 2-1-22 Time: 1545				Received By: Tamara Alda Kye				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Phone #:											
Relinquished By:				Date:				Received By:				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No				Add'l Fax #:											
Delivered By: (Circle One) 3.9c C-0.5c				Sample Condition				CHECKED BY:				Please email results to pm@etechenv.com.															
Sampler - UPS - Bus - Other:				Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				(Initials) JO.																			



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

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February 09, 2022

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: PWMS DERRINGER TO WINCHESTER LINE

Enclosed are the results of analyses for samples received by the laboratory on 02/04/22 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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:	02/04/2022	Sampling Date:	02/04/2022
Reported:	02/09/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIM	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Jodi Henson
Project Location:	MEWBOURNE		

**Sample ID: WW # 6 (H220436-01)**

BTEX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/08/2022	ND	2.02	101	2.00	6.62		
Toluene*	<0.050	0.050	02/08/2022	ND	1.98	98.9	2.00	7.04		
Ethylbenzene*	<0.050	0.050	02/08/2022	ND	2.00	99.8	2.00	6.49		
Total Xylenes*	<0.150	0.150	02/08/2022	ND	6.15	103	6.00	6.36		
Total BTEX	<0.300	0.300	02/08/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	02/08/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2022	ND	201	101	200	0.812	
DRO >C10-C28*	<10.0	10.0	02/08/2022	ND	222	111	200	0.862	
EXT DRO >C28-C36	<10.0	10.0	02/08/2022	ND					

Surrogate: 1-Chlorooctane 112 % 66.9-136

Surrogate: 1-Chlorooctadecane 121 % 59.5-142

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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:	02/04/2022	Sampling Date:	02/04/2022
Reported:	02/09/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Jodi Henson
Project Location:	MEWBOURNE		

**Sample ID: EW # 6 (H220436-02)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/08/2022	ND	2.02	101	2.00	6.62		
Toluene*	<0.050	0.050	02/08/2022	ND	1.98	98.9	2.00	7.04		
Ethylbenzene*	<0.050	0.050	02/08/2022	ND	2.00	99.8	2.00	6.49		
Total Xylenes*	<0.150	0.150	02/08/2022	ND	6.15	103	6.00	6.36		
Total BTEx	<0.300	0.300	02/08/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	02/08/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2022	ND	201	101	200	0.812	
DRO >C10-C28*	<10.0	10.0	02/08/2022	ND	222	111	200	0.862	
EXT DRO >C28-C36	<10.0	10.0	02/08/2022	ND					

Surrogate: 1-Chlorooctane 116 % 66.9-136

Surrogate: 1-Chlorooctadecane 124 % 59.5-142

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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:	02/04/2022	Sampling Date:	02/04/2022
Reported:	02/09/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Jodi Henson
Project Location:	MEWBOURNE		

**Sample ID: NW # 4 (H220436-03)**

BTEx 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/08/2022	ND	2.02	101	2.00	6.62	
Toluene*	<0.050	0.050	02/08/2022	ND	1.98	98.9	2.00	7.04	
Ethylbenzene*	<0.050	0.050	02/08/2022	ND	2.00	99.8	2.00	6.49	
Total Xylenes*	<0.150	0.150	02/08/2022	ND	6.15	103	6.00	6.36	
Total BTEx	<0.300	0.300	02/08/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/08/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2022	ND	201	101	200	0.812	
DRO >C10-C28*	<10.0	10.0	02/08/2022	ND	222	111	200	0.862	
EXT DRO >C28-C36	<10.0	10.0	02/08/2022	ND					

Surrogate: 1-Chlorooctane 108 % 66.9-136

Surrogate: 1-Chlorooctadecane 114 % 59.5-142

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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:	02/04/2022	Sampling Date:	02/04/2022
Reported:	02/09/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Jodi Henson
Project Location:	MEWBOURNE		

**Sample ID: NW # 5 (H220436-04)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/08/2022	ND	2.02	101	2.00	6.62		
Toluene*	<0.050	0.050	02/08/2022	ND	1.98	98.9	2.00	7.04		
Ethylbenzene*	<0.050	0.050	02/08/2022	ND	2.00	99.8	2.00	6.49		
Total Xylenes*	<0.150	0.150	02/08/2022	ND	6.15	103	6.00	6.36		
Total BTEx	<0.300	0.300	02/08/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	02/08/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2022	ND	201	101	200	0.812	
DRO >C10-C28*	<10.0	10.0	02/08/2022	ND	222	111	200	0.862	
EXT DRO >C28-C36	<10.0	10.0	02/08/2022	ND					

Surrogate: 1-Chlorooctane 108 % 66.9-136

Surrogate: 1-Chlorooctadecane 115 % 59.5-142

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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:	02/04/2022	Sampling Date:	02/04/2022
Reported:	02/09/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Jodi Henson
Project Location:	MEWBOURNE		

**Sample ID: EW # 7 (H220436-05)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/08/2022	ND	2.02	101	2.00	6.62		
Toluene*	<0.050	0.050	02/08/2022	ND	1.98	98.9	2.00	7.04		
Ethylbenzene*	<0.050	0.050	02/08/2022	ND	2.00	99.8	2.00	6.49		
Total Xylenes*	<0.150	0.150	02/08/2022	ND	6.15	103	6.00	6.36		
Total BTEx	<0.300	0.300	02/08/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/08/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2022	ND	201	101	200	0.812	
DRO >C10-C28*	<10.0	10.0	02/08/2022	ND	222	111	200	0.862	
EXT DRO >C28-C36	<10.0	10.0	02/08/2022	ND					

Surrogate: 1-Chlorooctane 117 % 66.9-136

Surrogate: 1-Chlorooctadecane 123 % 59.5-142

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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:	02/04/2022	Sampling Date:	02/04/2022
Reported:	02/09/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Jodi Henson
Project Location:	MEWBOURNE		

**Sample ID: WW # 8 (H220436-06)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/08/2022	ND	2.02	101	2.00	6.62		
Toluene*	<0.050	0.050	02/08/2022	ND	1.98	98.9	2.00	7.04		
Ethylbenzene*	<0.050	0.050	02/08/2022	ND	2.00	99.8	2.00	6.49		
Total Xylenes*	<0.150	0.150	02/08/2022	ND	6.15	103	6.00	6.36		
Total BTEx	<0.300	0.300	02/08/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/08/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2022	ND	201	101	200	0.812	
DRO >C10-C28*	<10.0	10.0	02/08/2022	ND	222	111	200	0.862	
EXT DRO >C28-C36	<10.0	10.0	02/08/2022	ND					

Surrogate: 1-Chlorooctane 109 % 66.9-136

Surrogate: 1-Chlorooctadecane 114 % 59.5-142

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:	02/04/2022	Sampling Date:	02/04/2022
Reported:	02/09/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Jodi Henson
Project Location:	MEWBOURNE		

**Sample ID: WW # 9 (H220436-07)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/08/2022	ND	2.02	101	2.00	6.62		
Toluene*	<0.050	0.050	02/08/2022	ND	1.98	98.9	2.00	7.04		
Ethylbenzene*	<0.050	0.050	02/08/2022	ND	2.00	99.8	2.00	6.49		
Total Xylenes*	<0.150	0.150	02/08/2022	ND	6.15	103	6.00	6.36		
Total BTEX	<0.300	0.300	02/08/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/08/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/08/2022	ND	201	101	200	0.812	
DRO >C10-C28*	<10.0	10.0	02/08/2022	ND	222	111	200	0.862	
EXT DRO >C28-C36	<10.0	10.0	02/08/2022	ND					

Surrogate: 1-Chlorooctane 113 % 66.9-136

Surrogate: 1-Chlorooctadecane 119 % 59.5-142

Cardinal Laboratories

\*=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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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

<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> 15345 <b>Project Owner:</b> <b>Project Name:</b> PWMS Derringer To Winchester Line <b>Project Location:</b> <b>Sampler Name:</b> Aaron Kios				<b>BILL TO</b> <b>P.O. #:</b> <b>Company:</b> Mewbourne <b>Attn:</b> Robbie Runnels <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>				<b>ANALYSIS REQUEST</b>												
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING		Chloride	TPH (8015M)	BTEX (8021B)								
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:											
H220436																				
1	WW#6.		X	X						X	X	X								
2	EW#6.		X	X						X	X	X								
3	NW#4.		X	X						X	X	X								
4	NW#5.		X	X						X	X	X								
5	EW#7.		X	X						X	X	X								
6	WW#8.		X	X						X	X	X								
7	WW#9.		X	X						X	X	X								

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<b>Relinquished By:</b> Aaron Kios <b>Relinquished By:</b> Date: 2/4/22 Time: 10:15 <b>Delivered By: (Circle One)</b> 2.90 Sampler - UPS - Bus - Other: 2.40 Sample Condition: Cool Intact [X] Yes [X] Yes [ ] No [ ] No	<b>Received By:</b> Jodi Hanson <b>Received By:</b> Date: 2/4/22 Time: 10:15 CHECKED BY: (initials) JH	<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 copy of COC and results to pm@etechenv.com.
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March 18, 2022

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: PWMS DERRINGER TO WINCHESTER LINE

Enclosed are the results of analyses for samples received by the laboratory on 02/11/22 15:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

Etech Environmental & Safety Solutions  
2617 W MARLAND  
HOBBS NM, 88240

Project: PWMS DERRINGER TO WINCHEST  
Project Number: 15345  
Project Manager: LANCE CRENSHAW  
Fax To:

Reported:  
18-Mar-22 14:19

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW # 7	H220555-01	Soil	11-Feb-22 00:00	11-Feb-22 15:05
SW # 8	H220555-02	Soil	11-Feb-22 00:00	11-Feb-22 15:05
WW # 11	H220555-03	Soil	11-Feb-22 00:00	11-Feb-22 15:05

03/18/22 - Client changed the sample ID of -03. This is the revised report and will replace the one sent on 02/15/22.

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

Etech Environmental & Safety Solutions  
2617 W MARLAND  
HOBBS NM, 88240

Project: PWMS DERRINGER TO WINCHEST  
Project Number: 15345  
Project Manager: LANCE CRENSHAW  
Fax To:

Reported:  
18-Mar-22 14:19

**SW # 7****H220555-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Chloride	80.0		16.0	mg/kg	4	2021501	GM	15-Feb-22	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2021404	MS/	14-Feb-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140 2021404 MS/ 14-Feb-22 8021B

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	2021406	CK	14-Feb-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2021406	CK	14-Feb-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2021406	CK	14-Feb-22	8015B	

Surrogate: 1-Chlorooctane 96.9 % 66.9-136 2021406 CK 14-Feb-22 8015B

Surrogate: 1-Chlorooctadecane 111 % 59.5-142 2021406 CK 14-Feb-22 8015B

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
2617 W MARLAND  
HOBBS NM, 88240

Project: PWMS DERRINGER TO WINCHEST  
Project Number: 15345  
Project Manager: LANCE CRENSHAW  
Fax To:

Reported:  
18-Mar-22 14:19

**SW # 8****H220555-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Chloride	64.0		16.0	mg/kg	4	2021501	GM	15-Feb-22	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Toluene*	<0.050		0.050	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	2021404	MS/	14-Feb-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			102 %	69.9-140		2021404	MS/	14-Feb-22	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	2021406	CK	14-Feb-22	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	2021406	CK	14-Feb-22	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	2021406	CK	14-Feb-22	8015B	

Surrogate: 1-Chlorooctane			103 %	66.9-136		2021406	CK	14-Feb-22	8015B	
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Surrogate: 1-Chlorooctadecane			117 %	59.5-142		2021406	CK	14-Feb-22	8015B	
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**Analytical Results For:**

Etech Environmental & Safety Solutions  
2617 W MARLAND  
HOBBS NM, 88240

Project: PWMS DERRINGER TO WINCHEST  
Project Number: 15345  
Project Manager: LANCE CRENSHAW  
Fax To:

Reported:  
18-Mar-22 14:19

**WW # 11**  
**H220555-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>112</b>		16.0	mg/kg	4	2021501	GM	15-Feb-22	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050	0.050	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Toluene*	<0.050	0.050	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	2021404	MS/	14-Feb-22	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	2021404	MS/	14-Feb-22	8021B	

Surrogate: 4-Bromofluorobenzene (PID)	102 %	69.9-140	2021404	MS/	14-Feb-22	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0	10.0	mg/kg	1	2021406	CK	15-Feb-22	8015B	
DRO >C10-C28*	<10.0	10.0	mg/kg	1	2021406	CK	15-Feb-22	8015B	
EXT DRO >C28-C36	<10.0	10.0	mg/kg	1	2021406	CK	15-Feb-22	8015B	

Surrogate: 1-Chlorooctane	109 %	66.9-136	2021406	CK	15-Feb-22	8015B	
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Surrogate: 1-Chlorooctadecane	124 %	59.5-142	2021406	CK	15-Feb-22	8015B	
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**Analytical Results For:**

Etech Environmental & Safety Solutions  
2617 W MARLAND  
HOBBS NM, 88240

Project: PWMS DERRINGER TO WINCHEST  
Project Number: 15345  
Project Manager: LANCE CRENSHAW  
Fax To:

Reported:  
18-Mar-22 14:19

**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2021501 - 1:4 DI Water</b>									
<b>Blank (2021501-BLK1)</b>					Prepared & Analyzed: 15-Feb-22				
Chloride	ND	16.0	mg/kg						
<b>LCS (2021501-BS1)</b>					Prepared & Analyzed: 15-Feb-22				
Chloride	416	16.0	mg/kg	400		104	80-120		
<b>LCS Dup (2021501-BSD1)</b>					Prepared & Analyzed: 15-Feb-22				
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20

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**Analytical Results For:**

Etech Environmental & Safety Solutions  
2617 W MARLAND  
HOBBS NM, 88240

Project: PWMS DERRINGER TO WINCHESTI  
Project Number: 15345  
Project Manager: LANCE CRENSHAW  
Fax To:

Reported:  
18-Mar-22 14:19

**Volatile Organic Compounds by EPA Method 8021 - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2021404 - Volatiles****Blank (2021404-BLK1)**

Prepared &amp; Analyzed: 14-Feb-22

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0518		mg/kg	0.0500		104	69.9-140			

**LCS (2021404-BS1)**

Prepared &amp; Analyzed: 14-Feb-22

Benzene	1.82	0.050	mg/kg	2.00		91.1	85.1-114			
Toluene	1.83	0.050	mg/kg	2.00		91.6	88.6-116			
Ethylbenzene	1.80	0.050	mg/kg	2.00		90.0	84.4-115			
m,p-Xylene	3.80	0.100	mg/kg	4.00		94.9	85.5-116			
o-Xylene	1.82	0.050	mg/kg	2.00		91.2	85.2-111			
Total Xylenes	5.62	0.150	mg/kg	6.00		93.7	86.2-113			
Surrogate: 4-Bromofluorobenzene (PID)	0.0500		mg/kg	0.0500		100	69.9-140			

**LCS Dup (2021404-BS1)**

Prepared &amp; Analyzed: 14-Feb-22

Benzene	2.03	0.050	mg/kg	2.00		101	85.1-114	10.8	12.6	
Toluene	2.03	0.050	mg/kg	2.00		101	88.6-116	10.2	13.3	
Ethylbenzene	1.98	0.050	mg/kg	2.00		98.8	84.4-115	9.35	13.9	
m,p-Xylene	4.14	0.100	mg/kg	4.00		103	85.5-116	8.55	13.6	
o-Xylene	1.99	0.050	mg/kg	2.00		99.6	85.2-111	8.81	14.1	
Total Xylenes	6.13	0.150	mg/kg	6.00		102	86.2-113	8.63	13.4	
Surrogate: 4-Bromofluorobenzene (PID)	0.0499		mg/kg	0.0500		99.9	69.9-140			

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

Etech Environmental & Safety Solutions  
2617 W MARLAND  
HOBBS NM, 88240

Project: PWMS DERRINGER TO WINCHEST  
Project Number: 15345  
Project Manager: LANCE CRENSHAW  
Fax To:

Reported:  
18-Mar-22 14:19

**Petroleum Hydrocarbons by GC FID - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2021406 - General Prep - Organics****Blank (2021406-BLK1)**

Prepared &amp; Analyzed: 14-Feb-22

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	56.8		mg/kg	50.0		114	66.9-136			
Surrogate: 1-Chlorooctadecane	65.1		mg/kg	50.0		130	59.5-142			

**LCS (2021406-BS1)**

Prepared &amp; Analyzed: 14-Feb-22

GRO C6-C10	202	10.0	mg/kg	200		101	81.6-129			
DRO >C10-C28	206	10.0	mg/kg	200		103	83-129			
Total TPH C6-C28	408	10.0	mg/kg	400		102	84.5-127			
Surrogate: 1-Chlorooctane	61.5		mg/kg	50.0		123	66.9-136			
Surrogate: 1-Chlorooctadecane	68.6		mg/kg	50.0		137	59.5-142			

**LCS Dup (2021406-BS1)**

Prepared &amp; Analyzed: 14-Feb-22

GRO C6-C10	198	10.0	mg/kg	200		99.2	81.6-129	1.64	21.4	
DRO >C10-C28	204	10.0	mg/kg	200		102	83-129	1.06	17.9	
Total TPH C6-C28	402	10.0	mg/kg	400		101	84.5-127	1.35	17.6	
Surrogate: 1-Chlorooctane	60.0		mg/kg	50.0		120	66.9-136			
Surrogate: 1-Chlorooctadecane	67.3		mg/kg	50.0		135	59.5-142			

Cardinal Laboratories

\*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager

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

---

**Notes and Definitions**

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

---

Cardinal Laboratories

\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager

**ARDINAL LABORATORIES**

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

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

---

February 16, 2022

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: PWMS DERRINGER TO WINCHESTER LINE

Enclosed are the results of analyses for samples received by the laboratory on 02/14/22 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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:	02/14/2022	Sampling Date:	02/14/2022
Reported:	02/16/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: EW #8 (H220568-01)**

BTX 8021B		mg/kg		Analyzed By: MS/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/15/2022	ND	1.81	90.4	2.00	12.2	
Toluene*	<0.050	0.050	02/15/2022	ND	1.81	90.6	2.00	10.4	
Ethylbenzene*	<0.050	0.050	02/15/2022	ND	1.76	87.8	2.00	9.82	
Total Xylenes*	<0.150	0.150	02/15/2022	ND	5.49	91.5	6.00	9.49	
Total BTX	<0.300	0.300	02/15/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	02/15/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/15/2022	ND	246	123	200	4.40	
DRO >C10-C28*	<10.0	10.0	02/15/2022	ND	220	110	200	1.39	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 86.8 % 66.9-136

Surrogate: 1-Chlorooctadecane 90.3 % 59.5-142

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:	02/14/2022	Sampling Date:	02/14/2022
Reported:	02/16/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: EW #9 (H220568-02)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/15/2022	ND	1.81	90.4	2.00	12.2		
Toluene*	<0.050	0.050	02/15/2022	ND	1.81	90.6	2.00	10.4		
Ethylbenzene*	<0.050	0.050	02/15/2022	ND	1.76	87.8	2.00	9.82		
Total Xylenes*	<0.150	0.150	02/15/2022	ND	5.49	91.5	6.00	9.49		
Total BTEX	<0.300	0.300	02/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/15/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/15/2022	ND	246	123	200	4.40	
DRO >C10-C28*	<10.0	10.0	02/15/2022	ND	220	110	200	1.39	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 91.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 94.9 % 59.5-142

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:	02/14/2022	Sampling Date:	02/14/2022
Reported:	02/16/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: WW #10 (H220568-03)**

BTX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/15/2022	ND	1.81	90.4	2.00	12.2		
Toluene*	<0.050	0.050	02/15/2022	ND	1.81	90.6	2.00	10.4		
Ethylbenzene*	<0.050	0.050	02/15/2022	ND	1.76	87.8	2.00	9.82		
Total Xylenes*	<0.150	0.150	02/15/2022	ND	5.49	91.5	6.00	9.49		
Total BTX	<0.300	0.300	02/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	02/15/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/15/2022	ND	246	123	200	4.40	
DRO >C10-C28*	<10.0	10.0	02/15/2022	ND	220	110	200	1.39	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 92.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 94.6 % 59.5-142

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:	02/14/2022	Sampling Date:	02/14/2022
Reported:	02/16/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: SW #5 (H220568-04)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/15/2022	ND	1.81	90.4	2.00	12.2		
Toluene*	<0.050	0.050	02/15/2022	ND	1.81	90.6	2.00	10.4		
Ethylbenzene*	<0.050	0.050	02/15/2022	ND	1.76	87.8	2.00	9.82		
Total Xylenes*	<0.150	0.150	02/15/2022	ND	5.49	91.5	6.00	9.49		
Total BTEX	<0.300	0.300	02/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	02/15/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/15/2022	ND	246	123	200	4.40	
DRO >C10-C28*	<10.0	10.0	02/15/2022	ND	220	110	200	1.39	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 83.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 86.0 % 59.5-142

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:	02/14/2022	Sampling Date:	02/14/2022
Reported:	02/16/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: SW #6 (H220568-05)**

BTEx 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/15/2022	ND	1.81	90.4	2.00	12.2		
Toluene*	<0.050	0.050	02/15/2022	ND	1.81	90.6	2.00	10.4		
Ethylbenzene*	<0.050	0.050	02/15/2022	ND	1.76	87.8	2.00	9.82		
Total Xylenes*	<0.150	0.150	02/15/2022	ND	5.49	91.5	6.00	9.49		
Total BTEX	<0.300	0.300	02/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/15/2022	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/15/2022	ND	246	123	200	4.40	
DRO >C10-C28*	<10.0	10.0	02/15/2022	ND	220	110	200	1.39	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 79.8 % 66.9-136

Surrogate: 1-Chlorooctadecane 82.1 % 59.5-142

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:	02/14/2022	Sampling Date:	02/14/2022
Reported:	02/16/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	Cool & Intact
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: WW #7 (H220568-06)**

BTX 8021B		mg/kg		Analyzed By: MS/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/15/2022	ND	1.81	90.4	2.00	12.2		
Toluene*	<0.050	0.050	02/15/2022	ND	1.81	90.6	2.00	10.4		
Ethylbenzene*	<0.050	0.050	02/15/2022	ND	1.76	87.8	2.00	9.82		
Total Xylenes*	<0.150	0.150	02/15/2022	ND	5.49	91.5	6.00	9.49		
Total BTX	<0.300	0.300	02/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	02/15/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/15/2022	ND	246	123	200	4.40	
DRO >C10-C28*	<10.0	10.0	02/15/2022	ND	220	110	200	1.39	
EXT DRO >C28-C36	<10.0	10.0	02/15/2022	ND					

Surrogate: 1-Chlorooctane 84.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 87.7 % 59.5-142

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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

---

### Notes and Definitions

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

---

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

**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

---

March 14, 2022

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: PWMS DERRINGER TO WINCHESTER LINE

Enclosed are the results of analyses for samples received by the laboratory on 03/10/22 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. 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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 1 @ 5' (H220972-01)**

BTX 8021B		mg/kg		Analyzed By: MS\					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2022	ND	2.01	101	2.00	8.51	
Toluene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.90	
Ethylbenzene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.82	
Total Xylenes*	<0.150	0.150	03/10/2022	ND	6.18	103	6.00	8.31	
Total BTX	<0.300	0.300	03/10/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4480	16.0	03/11/2022	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	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 93.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 104 % 59.5-142

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\*=Accredited Analyte

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 1 @ 10' (H220972-02)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/10/2022	ND	2.01	101	2.00	8.51		
Toluene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.90		
Ethylbenzene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.82		
Total Xylenes*	<0.150	0.150	03/10/2022	ND	6.18	103	6.00	8.31		
Total BTEX	<0.300	0.300	03/10/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4960	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 101 % 66.9-136

Surrogate: 1-Chlorooctadecane 112 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 1 @ 15' (H220972-03)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/10/2022	ND	2.01	101	2.00	8.51		
Toluene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.90		
Ethylbenzene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.82		
Total Xylenes*	<0.150	0.150	03/10/2022	ND	6.18	103	6.00	8.31		
Total BTEx	<0.300	0.300	03/10/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4000	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	143	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 90.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 107 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 1 @ 20' (H220972-04)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/10/2022	ND	2.01	101	2.00	8.51		
Toluene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.90		
Ethylbenzene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.82		
Total Xylenes*	<0.150	0.150	03/10/2022	ND	6.18	103	6.00	8.31		
Total BTEx	<0.300	0.300	03/10/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3160	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 97.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 109 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 1 @ 25' (H220972-05)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/10/2022	ND	2.01	101	2.00	8.51		
Toluene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.90		
Ethylbenzene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.82		
Total Xylenes*	<0.150	0.150	03/10/2022	ND	6.18	103	6.00	8.31		
Total BTEx	<0.300	0.300	03/10/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1060	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 96.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 108 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 1 @ 30' (H220972-06)**

BTX 8021B		mg/kg		Analyzed By: MS\					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2022	ND	2.01	101	2.00	8.51	
Toluene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.90	
Ethylbenzene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.82	
Total Xylenes*	<0.150	0.150	03/10/2022	ND	6.18	103	6.00	8.31	
Total BTX	<0.300	0.300	03/10/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 100 % 66.9-136

Surrogate: 1-Chlorooctadecane 112 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 2 @ 5' (H220972-07)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/10/2022	ND	2.01	101	2.00	8.51		
Toluene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.90		
Ethylbenzene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.82		
Total Xylenes*	<0.150	0.150	03/10/2022	ND	6.18	103	6.00	8.31		
Total BTEx	<0.300	0.300	03/10/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	10200	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 98.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 111 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 2 @ 10' (H220972-08)**

BTX 8021B		mg/kg		Analyzed By: MS\					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/10/2022	ND	2.01	101	2.00	8.51	
Toluene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.90	
Ethylbenzene*	<0.050	0.050	03/10/2022	ND	2.00	99.9	2.00	8.82	
Total Xylenes*	<0.150	0.150	03/10/2022	ND	6.18	103	6.00	8.31	
Total BTX	<0.300	0.300	03/10/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3440	16.0	03/11/2022	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 91.3 % 66.9-136

Surrogate: 1-Chlorooctadecane 102 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 2 @ 15' (H220972-09)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	2.01	101	2.00	8.51		
Toluene*	<0.050	0.050	03/11/2022	ND	2.00	99.9	2.00	8.90		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	2.00	99.9	2.00	8.82		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.18	103	6.00	8.31		
Total BTEX	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	8530	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 98.6 % 66.9-136

Surrogate: 1-Chlorooctadecane 112 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 2 @ 20' (H220972-10)**

BTX 8021B		mg/kg		Analyzed By: MS\					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	2.01	101	2.00	8.51	
Toluene*	<0.050	0.050	03/11/2022	ND	2.00	99.9	2.00	8.90	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	2.00	99.9	2.00	8.82	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.18	103	6.00	8.31	
Total BTX	<0.300	0.300	03/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7730	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 88.4 % 66.9-136

Surrogate: 1-Chlorooctadecane 100 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 2 @ 25' (H220972-11)**

BTX 8021B		mg/kg		Analyzed By: MS\					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	2.01	101	2.00	8.51	
Toluene*	<0.050	0.050	03/11/2022	ND	2.00	99.9	2.00	8.90	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	2.00	99.9	2.00	8.82	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.18	103	6.00	8.31	
Total BTX	<0.300	0.300	03/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5120	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 90.8 % 66.9-136

Surrogate: 1-Chlorooctadecane 101 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 2 @ 30' (H220972-12)**

BTX 8021B		mg/kg		Analyzed By: MS\					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	2.01	101	2.00	8.51	
Toluene*	<0.050	0.050	03/11/2022	ND	2.00	99.9	2.00	8.90	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	2.00	99.9	2.00	8.82	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.18	103	6.00	8.31	
Total BTX	<0.300	0.300	03/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2480	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 94.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 105 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 2 @ 35' (H220972-13)**

BTX 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81		
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90		
Total BTX	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 96.5 % 66.9-136

Surrogate: 1-Chlorooctadecane 107 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 2 @ 40' (H220972-14)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81		
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90		
Total BTEx	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 94.7 % 66.9-136

Surrogate: 1-Chlorooctadecane 105 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 2 @ 45' (H220972-15)**

BTX 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81		
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90		
Total BTX	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 93.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 103 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 3 @ 5' (H220972-16)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81		
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90		
Total BTEx	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6240	16.0	03/11/2022	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 93.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 104 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 3 @ 10' (H220972-17)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81		
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90		
Total BTEx	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2160	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 96.9 % 66.9-136

Surrogate: 1-Chlorooctadecane 108 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 3 @ 15' (H220972-18)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81		
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90		
Total BTEx	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2400	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 98.1 % 66.9-136

Surrogate: 1-Chlorooctadecane 106 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 3 @ 20' (H220972-19)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81		
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90		
Total BTEx	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 91.2 % 66.9-136

Surrogate: 1-Chlorooctadecane 101 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 3 @ 25' (H220972-20)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81		
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90		
Total BTEx	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	199	99.7	200	4.03	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	199	99.7	200	3.00	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 91.0 % 66.9-136

Surrogate: 1-Chlorooctadecane 105 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 3 @ 30' (H220972-21)**

BTEx 8021B		mg/kg		Analyzed By: MS\						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81		
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02		
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31		
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90		
Total BTEX	<0.300	0.300	03/11/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	03/11/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	202	101	200	18.5	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	191	95.5	200	19.6	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 108 % 66.9-136

Surrogate: 1-Chlorooctadecane 109 % 59.5-142

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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:	03/10/2022	Sampling Date:	03/10/2022
Reported:	03/14/2022	Sampling Type:	Soil
Project Name:	PWMS DERRINGER TO WINCHESTER LIN	Sampling Condition:	** (See Notes)
Project Number:	15345	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE - EDDY CO., NM		

**Sample ID: B.H. # 3 @ 35' (H220972-22)**

BTX 8021B		mg/kg		Analyzed By: MS\					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/11/2022	ND	1.98	99.1	2.00	8.81	
Toluene*	<0.050	0.050	03/11/2022	ND	1.98	98.9	2.00	9.02	
Ethylbenzene*	<0.050	0.050	03/11/2022	ND	1.97	98.7	2.00	9.31	
Total Xylenes*	<0.150	0.150	03/11/2022	ND	6.11	102	6.00	8.90	
Total BTX	<0.300	0.300	03/11/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	03/11/2022	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/11/2022	ND	202	101	200	18.5	
DRO >C10-C28*	<10.0	10.0	03/11/2022	ND	191	95.5	200	19.6	
EXT DRO >C28-C36	<10.0	10.0	03/11/2022	ND					

Surrogate: 1-Chlorooctane 109 % 66.9-136

Surrogate: 1-Chlorooctadecane 111 % 59.5-142

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Celey D. Keene, Lab Director/Quality Manager

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### Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
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





# 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: Joel Lowry				P.O. #:				<div style="display: flex; justify-content: space-around;"> <div>Chloride</div> <div>TPH (8015M)</div> <div>BTEX (8021B)</div> </div>																				
Address: 2617 W Marland				Company: Newbourne																								
City: Hobbs		State: NM		Zip: 88240		Attn:																						
Phone #: (575) 264-9884		Fax #:		Address:		City:																						
Project #: 15345		Project Owner: Newbourne		State:		Zip:																						
Project Name: PWMS Derringer to Winchester		Project Location: Rural Eddy Co, NM		Phone #:		Fax #:																						
Sampler Name: Miguel Ramirez																												
FOR LAB USE ONLY																												
Lab I.D.	Sample I.D.	(GRAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME														
H220972																												
1	B.H. #1 @ 5'	G	1			X				X			3/10/22		X	X	X											
2	B.H. #1 @ 10'																											
3	B.H. #1 @ 15'																											
4	B.H. #1 @ 20'																											
5	B.H. #1 @ 25'																											
6	B.H. #1 @ 30'																											
7	B.H. #2 @ 5'																											
8	B.H. #2 @ 10'																											
9	B.H. #2 @ 15'																											
10	B.H. #2 @ 20'																											
<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: 3/10/22		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:																				
Time: 1450				Time: 1450		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																				
Relinquished By:		Date:		Received By:		REMARKS: Rush please																						
Time:																												
Delivered By: (Circle One)		21.1°C C-0.5%		Sample Condition		CHECKED BY: (Initials)																						
Sampler - UPS - Bus - Other:		20.6°C #113		Cool Intact		TO																						
				<input type="checkbox"/> Yes <input checked="" 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.				BILL TO				ANALYSIS REQUEST																																							
Project Manager: Joel Lowry				P.O. #:				Chloride TPH (8015M) BTEX (8021B)																																							
Address: 2617 W Marland				Company: Menbourne																																											
City: Hobbs State: NM Zip: 88240				Attn:																																											
Phone #: (575) 264-9884 Fax #:				Address:																																											
Project #: 15345 Project Owner: Menbourne				City:																																											
Project Name: PWMS Derringer to Winchester				State: Zip:																																											
Project Location: Rural Eddy CO, NM				Phone #:																																											
Sampler Name: Miguel Ramirez				Fax #:																																											
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																																					
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE		ICE / COOL		OTHER:		DATE		TIME																			
H220972																																															
11		B.H.2 @ 25'		G		1						X										Y				3/10/22				X		X		X													
12		B.H.2 @ 30'																																													
13		B.H.2 @ 35'																																													
14		B.H.2 @ 40'																																													
15		B.H.2 @ 45'																																													
16		B.H.3 @ 5'																																													
17		B.H.3 @ 10'																																													
18		B.H.3 @ 15'																																													
19		B.H.3 @ 20'																																													
20		B.H.3 @ 25'																																													
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																																															
Relinquished By: [Signature]										Date: 3-10-22 Time: 1450										Received By: [Signature]										Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: Add'l Fax #: REMARKS: Rush Please																	
Relinquished By: [Signature]										Date: Time:										Received By: [Signature]										Please email results and copy of CoC to pm@etechenv.com.																	
Delivered By: (Circle One) 21.1c C-0.5c										Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No										CHECKED BY: (Initials) [Signature]																											
Sampler - UPS - Bus - Other: 20.6c #113																																															



**ARDINAL LABORATORIES**

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

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 91764

**CONDITIONS**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 91764
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
jnobui	Remediation Summary and Backfill Request Accepted. Please backfill excavation per plan and provide photos and confirmation that backfill occurred in Closure Report. Please submit Closure Report to the OCD portal by April 22, 2022.	3/22/2022