

Incident ID	nAPP2236030437
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	>115 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input 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
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

Oil Conservation Division

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

Printed Name: Connor Walker Title: Sr. Engineer
Signature:  Date: 3/14/2023
email: cwalker@mewbourne.com Telephone: (806)202-5281

OCD Only

Received by: Jocelyn Harimon Date: 03/14/2023

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Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Connor Walker Title: Sr. Engineer
 Signature:  Date: 3/14/2023
 email: cwalker@mewbourne.com Telephone: (806)202-5281

OCD Only

Received by: Jocelyn Harimon Date: 03/14/2023

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

Closure Approved by:  Date: 03/21/2023
 Printed Name: Jennifer Nobui Title: Environmental Specialist A

Remediation Summary & Soil Closure Request

Mewbourne Oil Company ARWMS Deer Booster

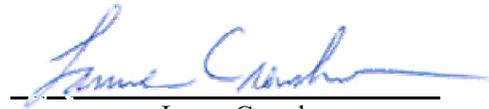
Lea County, New Mexico
Unit Letter "O", Section 21, Township 23 South, Range 34 East
Latitude 32.283680 North, Longitude 103.472709 West
NMOCD Reference No. nAPP2236030437

Prepared By:

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



Ben J. Arguijo



Lance Crenshaw



Midland • San Antonio • Lubbock • Hobbs • Lafayette

TABLE OF CONTENTS

	<i>Section</i>
PROJECT INFORMATION.....	1.0
SITE CHARACTERIZATION.....	2.0
CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE.....	3.0
REMEDIAATION ACTIVITIES SUMMARY.....	4.0
RESTORATION, RECLAMATION & RE-VEGETATION PLAN.....	5.0
SOIL CLOSURE REQUEST.....	6.0
LIMITATIONS.....	7.0
DISTRIBUTION.....	8.0

FIGURES

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

TABLES

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

APPENDICES

- Appendix A - Depth to Groundwater Information
- Appendix B - Field Data & Soil Profile Logs
- Appendix C - Laboratory Analytical Reports
- Appendix D - Photographic Log
- Appendix E - Regulatory Correspondence

1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Mewbourne Oil Company, has prepared this *Remediation Summary & Soil Closure Request* for the release site known as the ARWMS Deer Booster. Details of the release are summarized below:

Location of Release Source				
Latitude: <u>32.283680</u>		Longitude: <u>-103.472709</u>		
Provided GPS are in WGS84 format.				
Site Name: <u>ARWMS Deer Booster</u>		Site Type: <u>Pipeline</u>		
Date Release Discovered: <u>12/13/2022</u>		API # (if applicable): <u>N/A</u>		
Unit Letter	Section	Township	Range	County
"O"	21	23S	34E	Lea
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Private (Name <u>Limestone Basin Prop Ranch, LLC</u>)				
Nature and Volume of Release				
<input type="checkbox"/> Crude Oil	Volume Released (bbls)		Volume Recovered (bbls)	
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) <u>48</u>		Volume Recovered (bbls) <u>40</u>	
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released		Volume/Weight Recovered	
Cause of Release: <u>A 4" poly transition failed.</u>				
Initial Response				
<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.				

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

2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the ARWMS Deer Booster 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 January 19, 2023, an investigative soil boring was drilled nearby in an effort to determine if shallow groundwater is present in the area. The soil boring was advanced to a total depth of approximately 115 feet below ground surface (bgs) and left open for several days. A groundwater gauging event conducted on February 21, 2023, indicated the borehole was dry. The location of the investigative soil bore is depicted in Figure 2. A drilling log is provided in Appendix B.

What is the shallowest depth to groundwater beneath the area affected by the release?	>115'	
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
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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
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

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

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the release, depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standards for the ARWMS Deer Booster are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
>115'	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	20,000	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	2,500	100
	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	1,000	N/A
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

* Measured in milligrams per kilogram (mg/kg)

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

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

4.0 REMEDIATION ACTIVITIES SUMMARY

On January 25, 2023, remediation activities commenced at the release site. In accordance with NMOCD regulatory guidelines, impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standards was excavated and stockpiled on-site, pending transfer to an NMOCD-permitted surface waste facility for disposal. A Hach Quantab® chloride test kit and/or olfactory/visual senses were utilized to field-screen the horizontal extent of impacted soil and to guide the excavation. The sidewalls and floors of the excavation were advanced until field tests and field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards. Representative five-point composite confirmation soil samples were collected every 200 square feet from the sidewalls and floor of the excavated area to be submitted for laboratory analysis.

On January 5, 2023, Etech collected 20 confirmation soil samples (NW 1, NW 2, SW 1, SW 2, WW 1, and FS 1 @ 6 Inches through FS 15 @ 6 Inches) from the sidewalls and floor of the excavated area. The soil samples were submitted 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/or NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also below the applicable laboratory method detection limit (MDL). Chloride concentrations ranged from 16.0 mg/kg in soil samples NW 2 and SW 1 to 320 mg/kg in soil sample FS 12 @ 6 Inches.

On January 6, 2023, Etech collected 12 confirmation soil samples (NW 3 through NW 6, SW 3 through SW 7, and FS 16 @ 6 Inches through FS 18 @ 6 Inches) from the sidewalls and floor 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/or 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 16.0 mg/kg in soil sample SW 3 to 192 mg/kg in soil sample FS 18 @ 6 Inches.

On January 10, 2023, Etech collected 18 confirmation soil samples (NW 7 through NW 10, EW 1, EW 2, SW 8, WW 2, WW 3, WW 4, and FS 19 @ 6 Inches through FS 26 @ 4 Ft) from the sidewalls and floor 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/or 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 32.0 mg/kg in soil sample SW 8 to 1,440 mg/kg in soil sample FS 23 @ 4 Ft.

On January 11, 2023, Etech collected eight (8) confirmation soil samples (SW 9 and FS 27 @ 4 Ft through FS 33 @ 4 Ft) from the sidewalls and floor 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/or NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also below the applicable laboratory MDL, with the exceptions of soil samples FS 27 @ 4 Ft and FS 29 @ 4 Ft, which exhibited TPH concentrations of 13.6 mg/kg and 13.5 mg/kg, respectively. Chloride concentrations ranged from 592 mg/kg in soil sample SW 9 to 5,840 mg/kg in soil sample FS 27 @ 4 Ft.

The final dimensions of the excavated area were approximately 410 feet in length, 12 to 36 feet in width, and six (6) inches to four (4) feet in depth. During the course of remediation activities, Etech transported approximately 696 cubic yards of impacted soil to an NMOCD-permitted surface waste facility for disposal and imported approximately 740 cubic yards of locally sourced, non-impacted material to the site for use as backfill.

Soil sample locations and the extent of the excavated area 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. Laboratory analytical reports are provided in Appendix C. General photographs of the site are provided in Appendix D. Copies of all regulatory correspondence are provided in Appendix E.

5.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Upon receiving laboratory analytical results from confirmation soil samples, excavated areas were backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected area was 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.

6.0 SOIL CLOSURE REQUEST

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

Based on laboratory analytical results and field activities conducted to date, Etech recommends Mewbourne Oil Company provide copies of this *Remediation Summary & Soil Closure Request* to the appropriate agencies and request closure be granted to the ARWMS Deer Booster release site.

7.0 LIMITATIONS

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

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

8.0 DISTRIBUTION

Mewbourne Oil Company

4801 Business Park Blvd.

Hobbs, NM 88240

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division, District 1

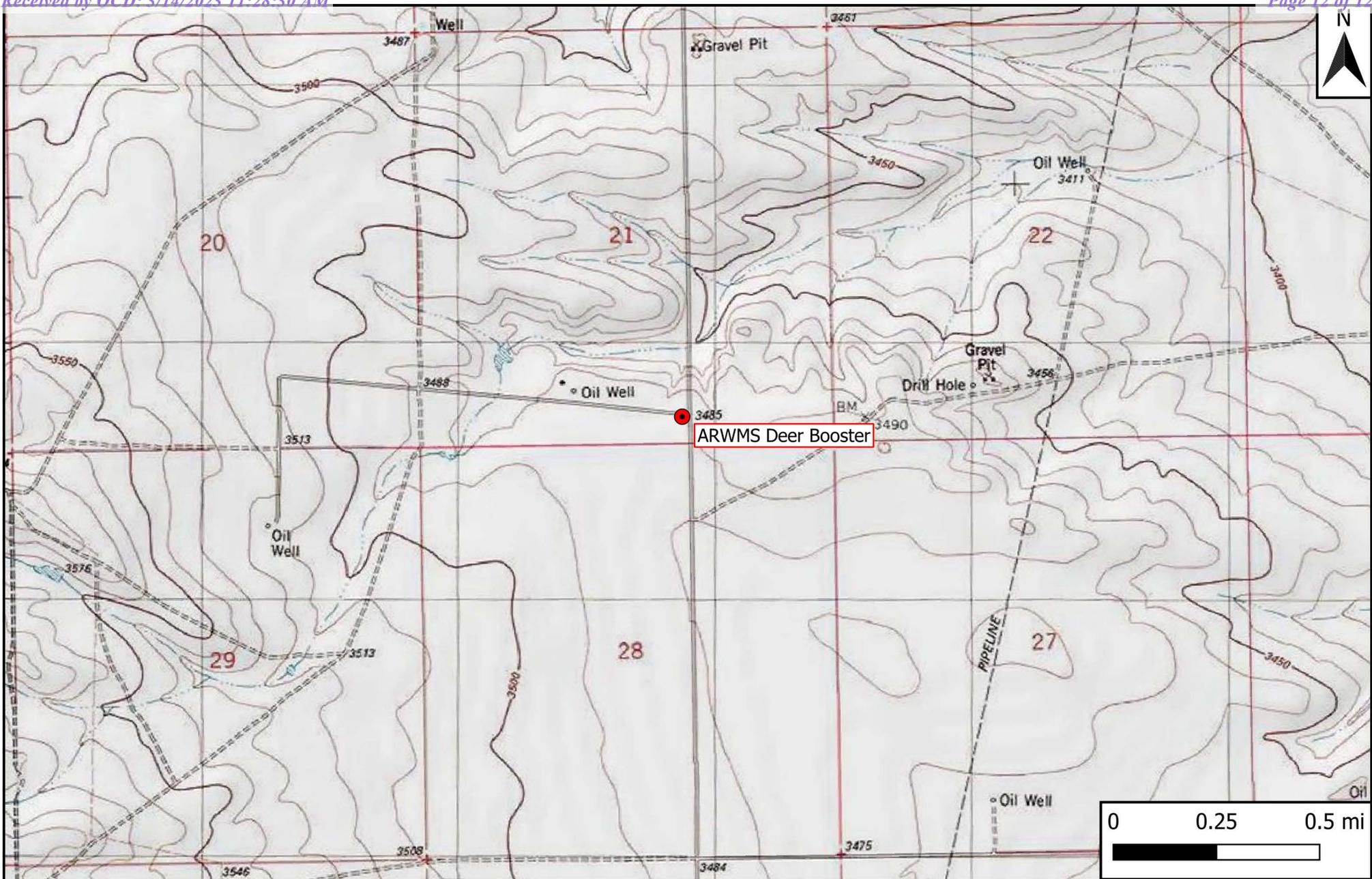
1220 South St. Francis Drive

Santa Fe, NM 87505

(Electronic Submission)

Figure 1

Topographic Map



Legend
 ● Site Location

Figure 1
 Topographic Map
 Mewbourne Oil Company
 ARWMS Deer Booster
 GPS: 32.28368, -103.472709
 Lea County

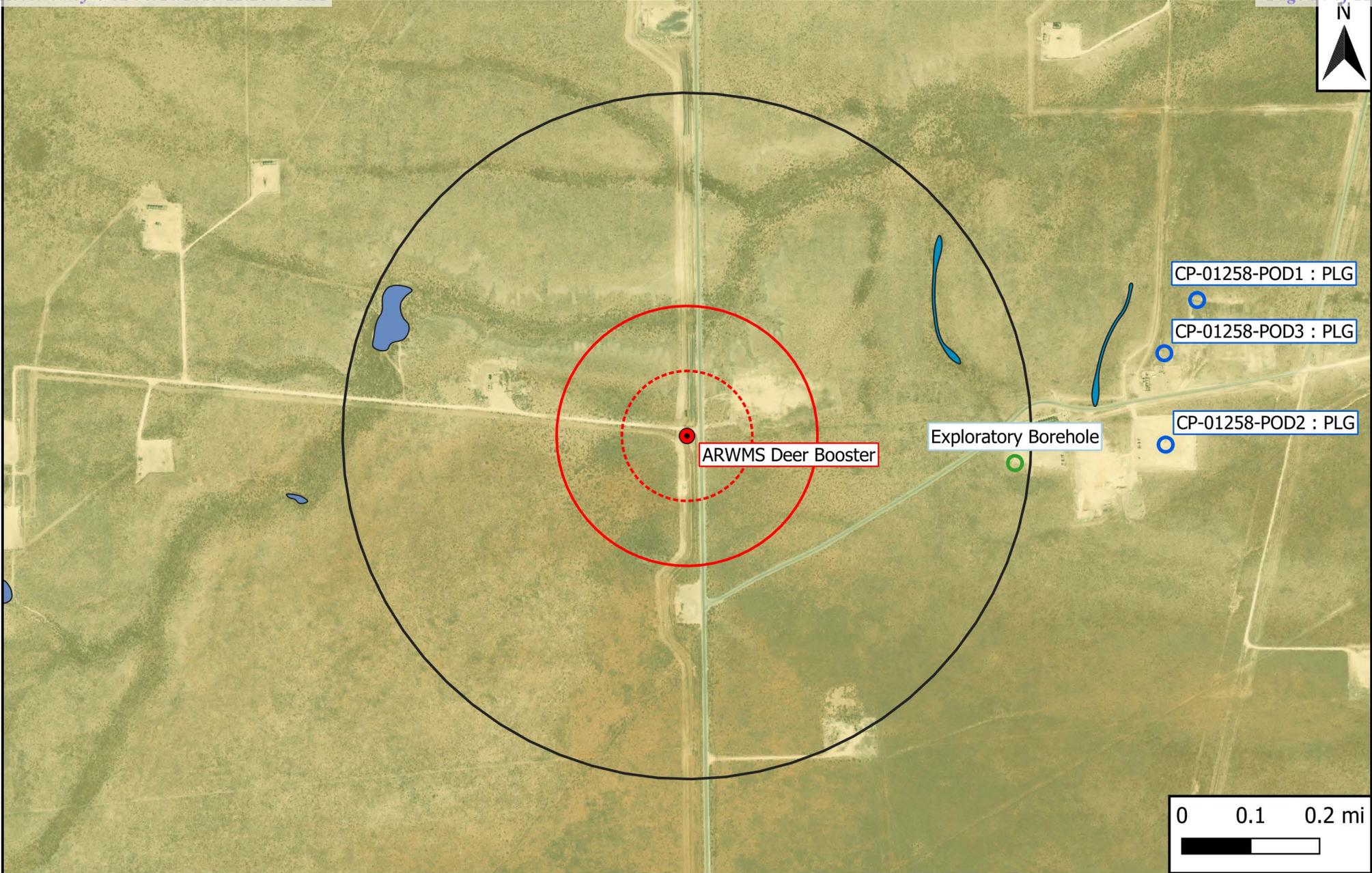


Drafted: bja

Checked: lc

Date: 12/12/22

Figure 2 Site Characterization Map

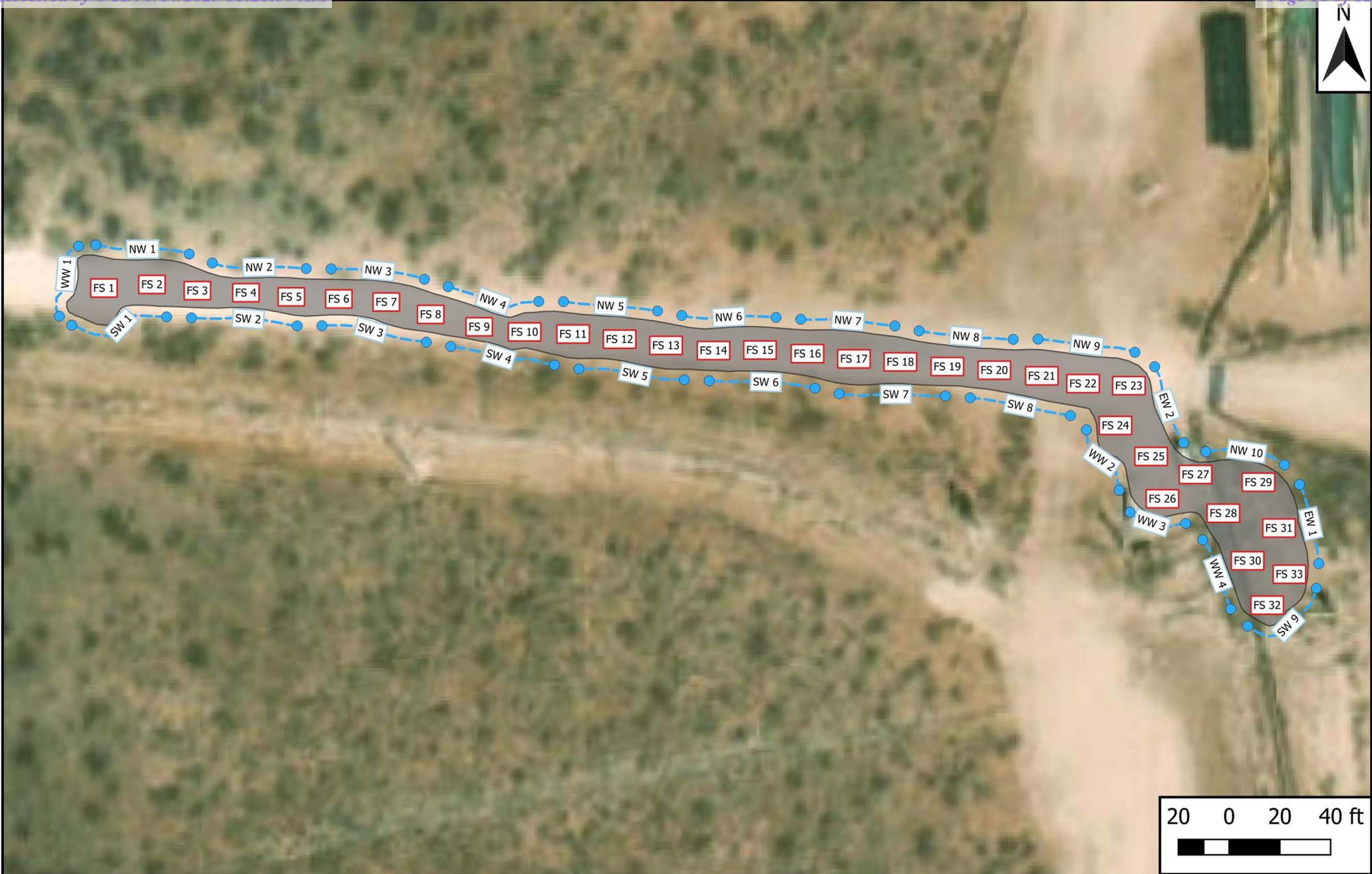


Legend		
Site Location	1% Annual Flood Chance	500-Ft Radius
Well - NMOSE	Emergent/Forested Wetlands	1,000-Ft Radius
Well - USGS	Freshwater Pond/Lake	0.5-Mi Radius
Well - Exploratory/Monitor	Karst Potential (Low/Med./High)	Municipal Boundary
Potash Mine Workings	Riverine	

Figure 2
 Site Characterization Map
 Mewbourne Oil Company
 ARWMS Deer Booster
 GPS: 32.28368, -103.472709
 Lea County



Figure 3 Site & Sample Location Map



- Legend**
- Excavation Extent
 - Composite Floor Sample
 - Composite Wall Sample

Figure 3
 Site & Sample Location Map
 Mewbourne Oil Company
 ARWMS Deer Booster
 GPS: 32.28368, -103.472709
 Lea County



Drafted: bja

Checked: lc

Date: 3/14/23

Table 1
Concentrations of BTEX, TPH & Chloride in Soil

Table 1 Concentrations of BTEX, TPH & Chloride in Soil Mewbourne Oil Company ARWMS Deer Booster NMOCD Ref. #: nAPP2236030437											
NMOCD Closure Criteria				10	50	N/A	N/A	1,000	N/A	2,500	20,000
NMOCD Reclamation Standard				10	50	N/A	N/A	N/A	N/A	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
NW 1	1/5/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
NW 2	1/5/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
NW 3	1/6/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
NW 4	1/6/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
NW 5	1/6/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
NW 6	1/6/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
NW 7	1/10/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
NW 8	1/10/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
NW 9	1/10/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
NW 10	1/10/2023	0.5-3.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	288
EW 1	1/10/2023	0.5-3.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	304
EW 2	1/10/2023	0.5-3.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SW 1	1/5/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW 2	1/5/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
SW 3	1/6/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW 4	1/6/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW 5	1/6/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	176
SW 6	1/6/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
SW 7	1/6/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SW 8	1/10/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW 9	1/11/2023	0.5-3.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	592
WW 1	1/5/2023	0-0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
WW 2	1/10/2023	0.5-3.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
WW 3	1/10/2023	0.5-3.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
WW 4	1/10/2023	0.5-3.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS 1 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
FS 2 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS 3 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
FS 4 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	288
FS 5 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
FS 6 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS 7 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FS 8 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FS 9 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FS 10 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
FS 11 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
FS 12 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	320
FS 13 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS 14 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	272
FS 15 @ 6 Inches	1/5/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
FS 16 @ 6 Inches	1/6/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
FS 17 @ 6 Inches	1/6/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
FS 18 @ 6 Inches	1/6/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
FS 19 @ 6 Inches	1/10/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128

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

Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

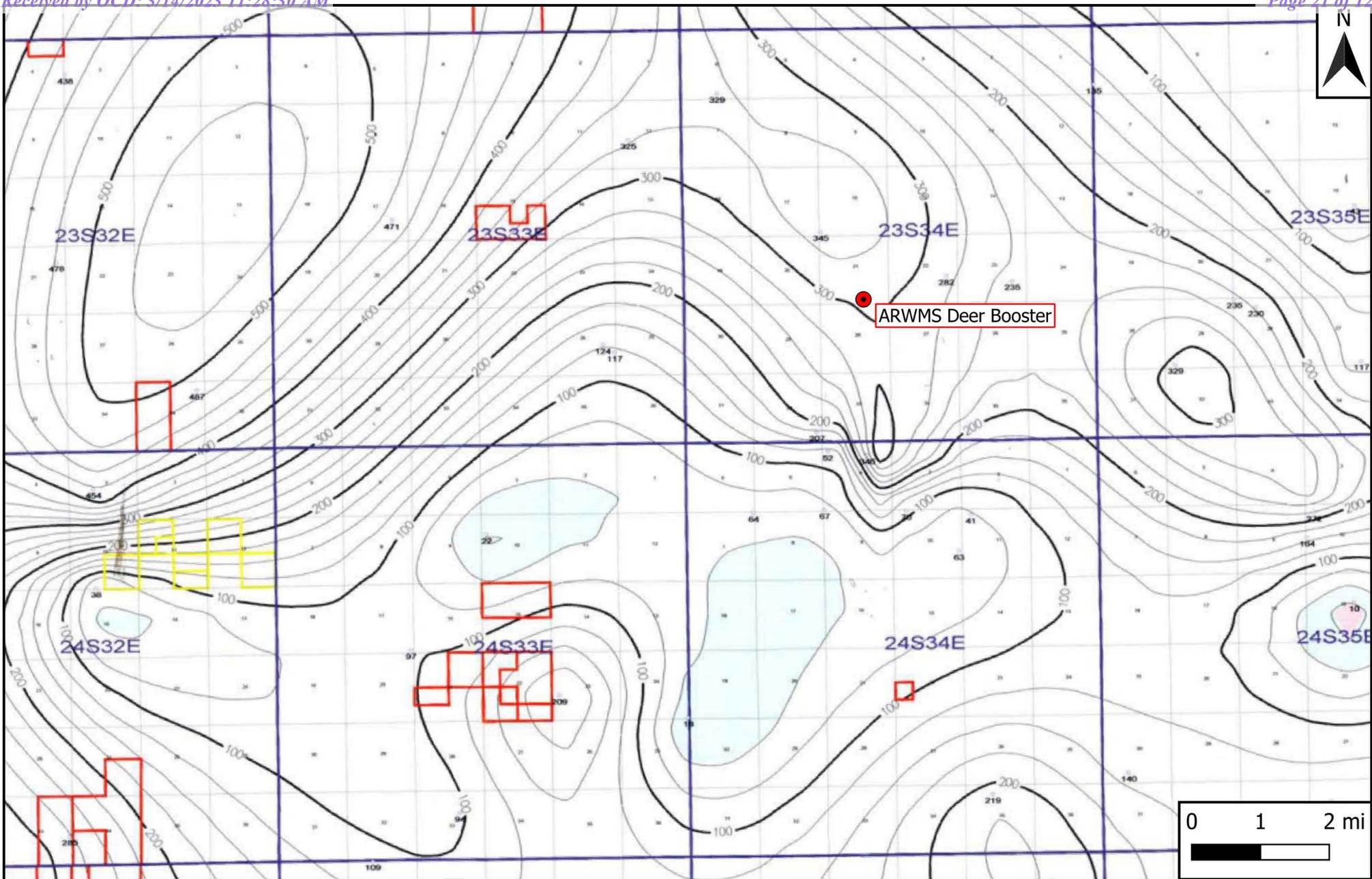
Table 1 Concentrations of BTEX, TPH & Chloride in Soil Mewbourne Oil Company ARWMS Deer Booster NMOCD Ref. #: nAPP2236030437											
NMOCD Closure Criteria				10	50	N/A	N/A	1,000	N/A	2,500	20,000
NMOCD Reclamation Standard				10	50	N/A	N/A	N/A	N/A	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
FS 20 @ 1 Ft	1/10/2023	1	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	592
FS 21 @ 6 Inches	1/10/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FS 22 @ 6 Inches	1/10/2023	0.5	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS 23 @ 4 Ft	1/10/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,440
FS 24 @ 4 Ft	1/10/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,100
FS 25 @ 4 Ft	1/10/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
FS 26 @ 4 Ft	1/10/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,120
FS 27 @ 4 Ft	1/11/2023	4	In-Situ	<0.050	<0.300	<10.0	13.6	13.6	<10.0	13.6	5,840
FS 28 @ 4 Ft	1/11/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,080
FS 29 @ 4 Ft	1/11/2023	4	In-Situ	<0.050	<0.300	<10.0	13.5	13.5	<10.0	13.5	2,600
FS 30 @ 4 Ft	1/11/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,240
FS 31 @ 4 Ft	1/11/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,720
FS 32 @ 4 Ft	1/11/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,920
FS 33 @ 4 Ft	1/11/2023	4	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	5,120

Dash (-): 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
 ARWMS Deer Booster
 GPS: 32.28368, -103.472709
 Lea County



Drafted: bja

Checked: lc

Date: 1/12/23



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tw	Rng	X	Y	Distance	Well Depth	Average Depth to Water	Water Column
CP.01258.POD2		CP	LE	1	4	3	22	23S	34E	644941	3572883	1137	65	--	
CP.01258.POD3		CP	LE	1	4	3	22	23S	34E	644938	3573097	1148	25	--	
CP.01258.POD1		CP	LE	1	4	3	22	23S	34E	645015	3573221	1249	25	--	

Average Depth to Water: --
Minimum Depth: --
Maximum Depth: --

Record Count: 3

UTM NAD83 Radius Search (in meters):

Easting (X): 643804.3 **Northing (Y):** 3572913.55 **Radius:** 1610

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

12/14/22 8:02 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)				(NAD83 UTM in meters)			
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 01258 POD1	1	4	3	22	23S	34E	645015	3573221

Driller License: 1711	Driller Company: STRAUB CORPORATION		
Driller Name: BRYAN, EDWARD (LD)			
Drill Start Date: 12/04/2013	Drill Finish Date: 12/04/2013	Plug Date:	
Log File Date: 12/23/2013	PCW Rcv Date:	Source:	
Pump Type:	Pipe Discharge Size:	Estimated Yield:	
Casing Size:	Depth Well: 25 feet	Depth Water:	

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

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POINT OF DIVERSION SUMMARY



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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STATE ENGINEER OFFICE

3/14/23 P 1:35

I. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) (POD1) SIANA CURRY FED #2 SWD SB-1				OSE FILE NUMBER(S) CP-1258			
	WELL OWNER NAME(S) SIANA OIL AND GAS CO,LLC				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 601 N MARIENFELD, SUITE 300				CITY MIDLAND	STATE TX	ZIP 79701	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 17	SECONDS 11	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
		LONGITUDE 103	27	36	W	* DATUM REQUIRED: WGS 84		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLUS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE FROM CO RD 21B GO ENE .7TH ON E-21 TO SITE ON L. NMNM- 9968, SW/4 SEC 22, T23S-R34E N32.286 W 103.461								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD-1711	NAME OF LICENSED DRILLER EDWARD BRYAN				NAME OF WELL DRILLING COMPANY STRAUB CORPORATION		
	DRILLING STARTED 12-4-13	DRILLING ENDED 12-4-13	DEPTH OF COMPLETED WELL (FT) 0	BORE HOLE DEPTH (FT) 25'	DEPTH WATER FIRST ENCOUNTERED (FT) N/A			
	COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input checked="" type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A			
	DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY							
	DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	25'	5"	N/A	N/A	N/A	N/A	N/A
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	2'	5"	.5 OF CONCRETE		TOPLoad		
	2'	25'	5"	6 BAGS OF 3/8 HOLEPLUG		TOPLoad		

FOR OSE INTERNAL USE			WR-20 WELL RECORD & LOG (Version 06/08/2012)		
FILE NUMBER	CP-1258	POD NUMBER	1	TRN NUMBER	536581
LOCATION	Mon	235.34E.22.341			PAGE 1 OF 2



New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)				(NAD83 UTM in meters)			
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 01258 POD2	1	4	3	22	23S	34E	644941	3572883

Driller License: 1711	Driller Company: STRAUB CORPORATION		
Driller Name: BRYAN, EDWARD (LD)			
Drill Start Date: 12/04/2013	Drill Finish Date: 12/04/2013	Plug Date:	
Log File Date: 12/23/2013	PCW Rcv Date:	Source:	
Pump Type:	Pipe Discharge Size:	Estimated Yield:	
Casing Size:	Depth Well: 65 feet	Depth Water:	

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

12/14/22 8:03 AM

POINT OF DIVERSION SUMMARY



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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STATE ENGINEER OFFICE

MAR 23 P 1:35

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) (POD2) SIANA CURRY FED #2 SWD SB-2				OSE FILE NUMBER(S) CP-1258			
	WELL OWNER NAME(S) SIANA OIL AND GAS CO,LLC				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 601 N MARIENFELD, SUITE 300				CITY MIDLAND	STATE TX	ZIP 79701	
	WELL LOCATION (FROM GPS)	DEGREES		MINUTES	SECONDS	* ACCURACY REQUIRED. ONE TENTH OF A SECOND * DATUM REQUIRED. WGS 84		
		LATITUDE	32	17	07			
	LONGITUDE	103	27	39	W			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE FROM CO RD 21B GO ENE .7TH ON E-21 TO SITE ON L. NMNM- 9968, SW/4 SEC 22, T23S-R34E N32.286 W 103.461								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD-1711	NAME OF LICENSED DRILLER EDWARD BRYAN			NAME OF WELL DRILLING COMPANY STRAUB CORPORATION			
	DRILLING STARTED 12-4-13	DRILLING ENDED 12-4-13	DEPTH OF COMPLETED WELL (FT) 0	BORE HOLE DEPTH (FT) 65'	DEPTH WATER FIRST ENCOUNTERED (FT) N/A			
	COMPLETED WELL IS. <input type="radio"/> ARTESIAN <input checked="" type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A			
	DRILLING FLUID <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY							
	DRILLING METHOD <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	65'	5"	N/A	N/A	N/A	N/A	N/A
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	2'	5"	.5 OF CONCRETE		TOPLoad		
	2'	65'	5"	5 BAGS OF 3/8 HOLEPLUG		TOPLoad		

FOR OSE INTERNAL USE				WR-20 WELL RECORD & LOG (Version 06/08/2012)			
FILE NUMBER	CP-1258	POD NUMBER	2	TRN NUMBER	536581		
LOCATION	mon	23S. 34E. 22. 341				PAGE 1 OF 2	



New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)				(NAD83 UTM in meters)			
		Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 01258 POD3	1	4	3	22	23S	34E	644938	3573097

Driller License: 1711	Driller Company: STRAUB CORPORATION	
Driller Name: BRYAN, EDWARD (LD)		
Drill Start Date: 12/04/2013	Drill Finish Date: 12/04/2013	Plug Date:
Log File Date: 12/23/2013	PCW Rcv Date:	Source:
Pump Type:	Pipe Discharge Size:	Estimated Yield:
Casing Size:	Depth Well: 25 feet	Depth Water:

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

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POINT OF DIVERSION SUMMARY



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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STATE ENGINEER OFFICE
ROSWELL, NM

2013 DEC 23 P 1:35

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER) (POD3) SIANA CURRY FED #2 SWD SB-3		OSE FILE NUMBER(S) CP-1258	
WELL OWNER NAME(S) SIANA OIL AND GAS CO,LLC		PHONE (OPTIONAL)	
WELL OWNER MAILING ADDRESS 601 N MARIENFELD, SUITE 300		CITY MIDLAND	STATE TX ZIP 79701
WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 17	SECONDS 07 N
	LONGITUDE 103	27	39 W
* ACCURACY REQUIRED ONE TENTH OF A SECOND			
* DATUM REQUIRED WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE FROM CO RD 21B GO ENE .7TH ON E-21 TO SITE ON L. NMNM- 9968, SW/4 SEC 22, T23S-R34E N32.286 W 103.461			

2. DRILLING & CASING INFORMATION

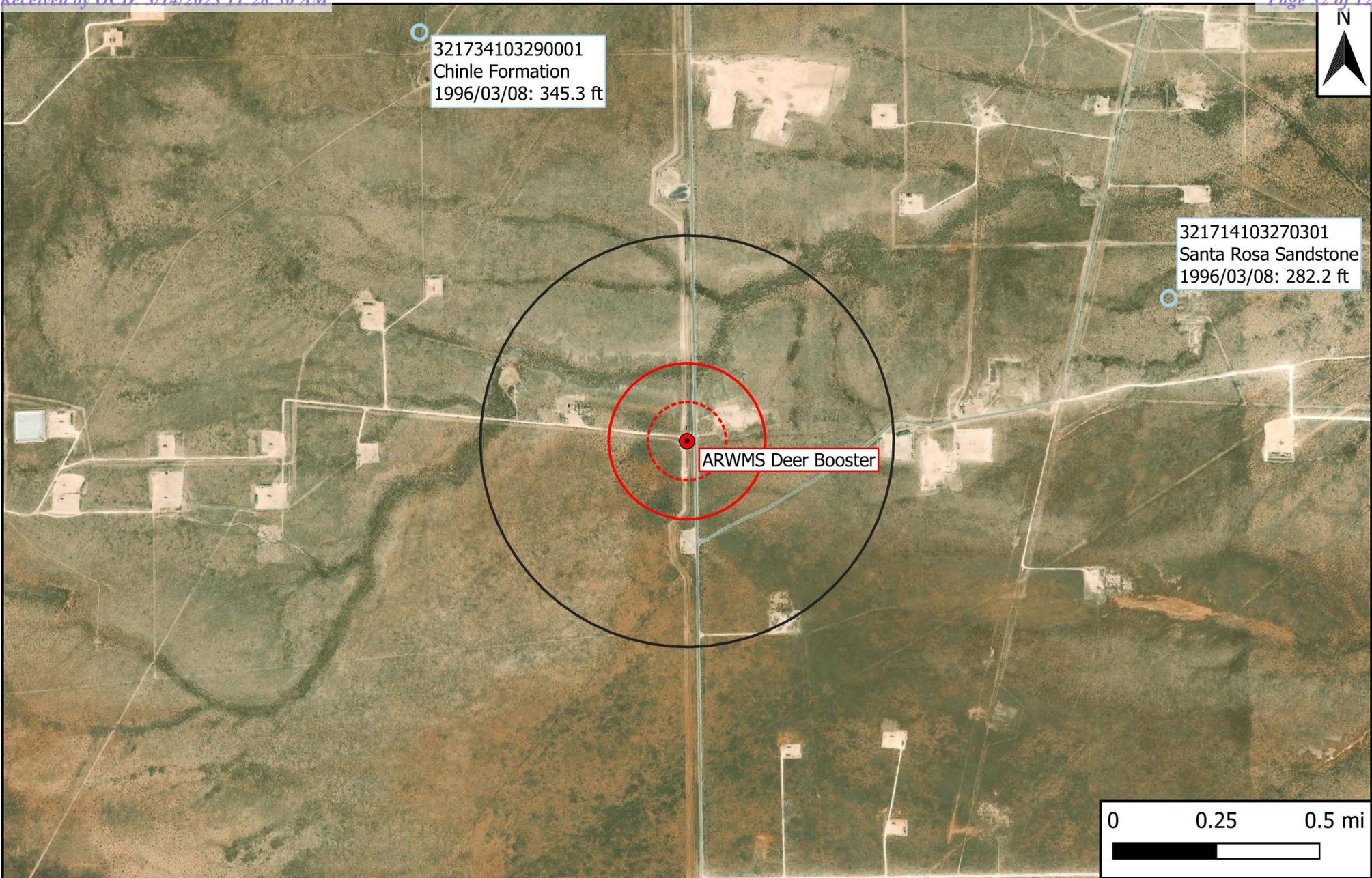
LICENSE NUMBER WD-1711	NAME OF LICENSED DRILLER EDWARD BRYAN		NAME OF WELL DRILLING COMPANY STRAUB CORPORATION				
DRILLING STARTED 12-4-13	DRILLING ENDED 12-4-13	DEPTH OF COMPLETED WELL (FT) 0	BORE HOLE DEPTH (FT) 25'	DEPTH WATER FIRST ENCOUNTERED (FT) N/A			
COMPLETED WELL IS: <input type="radio"/> ARTESIAN <input checked="" type="radio"/> DRY HOLE <input type="radio"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A			
DRILLING FLUID: <input checked="" type="radio"/> AIR <input type="radio"/> MUD ADDITIVES - SPECIFY:							
DRILLING METHOD: <input checked="" type="radio"/> ROTARY <input type="radio"/> HAMMER <input type="radio"/> CABLE TOOL <input type="radio"/> OTHER - SPECIFY:							
DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
FROM	TO						
0	25'	5"	N/A	N/A	N/A	N/A	N/A

3. ANNULAR MATERIAL

DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
FROM	TO				
0	2'	5"	.5 OF CONCRETE		TOPLOAD
2'	25'	5"	6 BAGS OF 3/8 HOLEPLUG		TOPLOAD

FOR OSE INTERNAL USE

FILE NUMBER CP-1258	POD NUMBER 3	WR-20 WELL RECORD & LOG (Version 06/08/2012)
LOCATION mon	TRN NUMBER 636581	
235.34E.22.341		PAGE 1 OF 2



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

Figure 5
 USGS Well Proximity Map
 Mewbourne Oil Company
 ARWMS Deer Booster
 GPS: 32.28368, -103.472709
 Lea County



Drafted: bja

Checked: lc

Date: 1/10/23



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Data Category:

Groundwater

Geographic Area:

United States

GO

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Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 321714103270301

Minimum number of levels = 1

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

USGS 321714103270301 23S.34E.22.421434

Lea County, New Mexico

Latitude 32°17'18", Longitude 103°27'08" NAD27

Land-surface elevation 3,420.00 feet above NGVD29

The depth of the well is 428 feet below land surface.

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

This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

Output formats

- [Table of data](#)
- [Tab-separated data](#)
- [Graph of data](#)
- [Reselect period](#)

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
1981-03-30			D	72019	284.11		1	Z			A
1986-03-21			D	72019	283.97		1	Z			A
1991-05-30			D	72019	282.28		1	Z			A
1996-03-08			D	72019	282.20		1	S			A



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Data Category: Groundwater Geographic Area: United States GO

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Search Results -- 1 sites found

Agency code = usgs
site_no list = 321734103290001

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 321734103290001 23S.34E.16.333312

Lea County, New Mexico
Latitude 32°17'53", Longitude 103°28'59" NAD27
Land-surface elevation 3,478.00 feet above NGVD29
The depth of the well is 400 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

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

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
1971-01-13			D 72019	344.05			1	Z			A
1976-12-16			D 72019	347.38			1	Z			A
1981-03-30			D 72019	345.40			1	Z			A
1986-03-21			D 72019	347.80			1	Z			A
1996-03-08			D 72019	345.30			1	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
Source of measurement		Not determined
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: 2023-03-13 18:06:29 EDT

0.41 0.31 nadww01

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
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Page Last Modified: 2023-03-13 18:07:58 EDT

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Appendix B

Field Data & Soil Profile Logs



Sample Log

Project: Arms Deer Project Date: _____
 Antelope PW Line
 Project Number: 1728 Latitude: 32.2837668 Longitude: -103.4728985

Sample ID	PID/Odor	Chloride Conc.	GPS
SW 1.	-	200	
NW 1.	-	588	
FS 1. @ 6 inches	-	536	
NW 1.	-	1260	
SW 2	-	536	
FS 2 @ 6 inches	-	588	
NW 1.	-	400	
FS 3. @ 6 inches	-	588	
FS 4. @ 6 inches	-	588	
NW 2.	-	ND	
SW 3.	-	ND	
FS 5. @ 6 inches	-	588	
FS 6. @ 6 inches	-	180	
FS 7. @ 6 inches	-	ND.	
FS 8. @ 6 inches	-	ND	
FS 9. @ 6 inches	-	180	
FS 10. @ 6 inches	-	212	
NW 3.	-	424	
SW 4.	-	232	
FS 11. @ 6 inches	-	300	
FS 12. @ 6 inches	-	468	
NW 4	-	200	
SW 5	-	200	
FS 13 @ 6 inches	-	536	
FS 14 @ 6 inches	-	200	
FS 15 @ 6 inches	-	380	
NW 5	-	588	
SW 6	-	172	
FS 16 @ 6 inches	-	536	
FS 17 @ 6 inches	-	588	
FS 18 @ 6 inches	-	416	
NW 6	-	200	
SW 7	-	296	
EW 1.	-	788	
EW 1.	-	332	
NW 7.	-	460	

Sample Point = SP #1 @ ## etc Test Trench = TT #1 @ ## Resamples= SP #1 @ 5b 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



Soil Profile

Date: _____

Project: Antelope PW Line

ARUMS Deep Row

Project Number: 172~~13~~⁵¹ Latitude: 32.2837668 Longitude: -103.4728985

Depth (ft. bgs)	Description
1	Caliche
2	Caliche sand-rock
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	

0-2
2-4

Soil Boring/Temporary Monitor Well SB-1

Client: Mewbourne Oil Company	Well/Borehole ID: SB-1	Drilling Company: Ready Drill, LLC
Site: ARWMS Deer Booster	Coordinates (NAD 83): 32.28301,-103.46458	Driller: Ready Drill, LLC
NMOCD Reference #: nAPP2236030437	Drilling Date: 1/19/2023	Drilling Method: Air Rotary
Location: Lea Co., NM	Depth of Boring (ft): 115	Logged By: Ready Drill, LLC
PLSS: U/L "O", Sec. 21, T23S, R34E	Depth to Groundwater (ft): N/A	Drafted By: B.J. Arguijo

Completion: N/A	Casing: N/A	Screen: N/A
------------------------	--------------------	--------------------

Comments: Soil boring was advanced in the southwest corner of the nearby Gazelle 22 B3MD Federal Com #001H/002H location.

Depth (ft)	Groundwater	Lithology	Material Description	Chloride Field Test	Lab Result	PID Reading	Well Construction
10			Caliche	-	-	-	
20			Sand	-	-	-	
30			Sand	-	-	-	
40			Sand	-	-	-	
50			Caliche	-	-	-	
60			Caliche	-	-	-	
70			Sand	-	-	-	
80			Sand	-	-	-	
90			Sand	-	-	-	
100			Soft sandstone	-	-	-	
110			Soft sandstone	-	-	-	
120			Notes: • Total Depth = 115 feet below ground surface (bgs) • Lines between material types represent approximate boundaries. Actual transitions may be gradual. • Due to the non-cohesive nature of the soil at lower depths, water was injected beginning at approximately 22 feet bgs to prevent collapse of the borehole.				
130							
140							

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

Appendix C

Laboratory Analytical Reports



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

January 10, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: ARUMS DEER BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 01/05/23 16:50.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

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:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 1 @ 6 INCHES (H230068-01)

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	01/09/2023	ND	2.02	101	2.00	8.94	
Toluene*	<0.050	0.050	01/09/2023	ND	2.19	110	2.00	8.47	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.15	108	2.00	8.18	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.63	110	6.00	7.77	
Total BTEX	<0.300	0.300	01/09/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	01/06/2023	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	01/06/2023	ND	203	102	200	6.89	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	198	99.1	200	4.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 70.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 85.0 % 49.1-148

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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:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 2 @ 6 INCHES (H230068-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2023	ND	2.02	101	2.00	8.94	
Toluene*	<0.050	0.050	01/09/2023	ND	2.19	110	2.00	8.47	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.15	108	2.00	8.18	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.63	110	6.00	7.77	
Total BTEX	<0.300	0.300	01/09/2023	ND					

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

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	01/06/2023	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	01/06/2023	ND	203	102	200	6.89	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	198	99.1	200	4.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 72.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.1 % 49.1-148

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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:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 3 @ 6 INCHES (H230068-03)

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	01/09/2023	ND	2.02	101	2.00	8.94	
Toluene*	<0.050	0.050	01/09/2023	ND	2.19	110	2.00	8.47	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.15	108	2.00	8.18	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.63	110	6.00	7.77	
Total BTEX	<0.300	0.300	01/09/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 77.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.4 % 49.1-148

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 HOBBS NM, 88240
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Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 4 @ 6 INCHES (H230068-04)

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	01/09/2023	ND	2.02	101	2.00	8.94	
Toluene*	<0.050	0.050	01/09/2023	ND	2.19	110	2.00	8.47	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.15	108	2.00	8.18	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.63	110	6.00	7.77	
Total BTEX	<0.300	0.300	01/09/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 75.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.7 % 49.1-148

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Analytical Results For:

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

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 5 @ 6 INCHES (H230068-05)

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	01/09/2023	ND	2.02	101	2.00	8.94	
Toluene*	<0.050	0.050	01/09/2023	ND	2.19	110	2.00	8.47	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.15	108	2.00	8.18	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.63	110	6.00	7.77	
Total BTEX	<0.300	0.300	01/09/2023	ND					

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

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	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 82.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 6 @ 6 INCHES (H230068-06)

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	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

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	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 82.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 7 @ 6 INCHES (H230068-07)

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	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

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	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 85.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.9 % 49.1-148

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Analytical Results For:

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

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 8 @ 6 INCHES (H230068-08)

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	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

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	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 79.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 87.2 % 49.1-148

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Analytical Results For:

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 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 9 @ 6 INCHES (H230068-09)

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	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

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	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 78.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 88.9 % 49.1-148

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Analytical Results For:

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 2617 W MARLAND
 HOBBS NM, 88240
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Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 10 @ 6 INCHES (H230068-10)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

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	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 83.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.8 % 49.1-148

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Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 11 @ 6 INCHES (H230068-11)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 83.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.5 % 49.1-148

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Analytical Results For:

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 2617 W MARLAND
 HOBBS NM, 88240
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Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 12 @ 6 INCHES (H230068-12)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 83.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.1 % 49.1-148

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Analytical Results For:

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

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 13 @ 6 INCHES (H230068-13)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

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	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 81.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.6 % 49.1-148

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Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 14 @ 6 INCHES (H230068-14)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 77.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.4 % 49.1-148

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Analytical Results For:

Etech Environmental & Safety Solutions
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 2617 W MARLAND
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Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 15 @ 6 INCHES (H230068-15)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 81.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.4 % 49.1-148

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: NW 1 (H230068-16)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 67.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 74.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: SW 1 (H230068-17)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

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	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 80.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: NW 2 (H230068-18)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

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	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 75.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 82.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: WW 1 (H230068-19)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 81.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 89.3 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/05/2023	Sampling Date:	01/05/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: SW 2 (H230068-20)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.01	101	2.00	3.14	
Toluene*	<0.050	0.050	01/08/2023	ND	2.18	109	2.00	3.46	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.15	107	2.00	3.61	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.62	110	6.00	3.84	
Total BTEX	<0.300	0.300	01/08/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	01/06/2023	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	01/06/2023	ND	205	102	200	4.57	
DRO >C10-C28*	<10.0	10.0	01/06/2023	ND	192	96.0	200	2.02	
EXT DRO >C28-C36	<10.0	10.0	01/06/2023	ND					

Surrogate: 1-Chlorooctane 82.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.4 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.		BILL TO				ANALYSIS REQUEST																					
Project Manager: <i>Lance Cranshaw</i>		P.O. #:				Chloride TPH (8015M) BTEX (8021B)																					
Address: P.O. Box 301		Company: <i>Mewbourne</i>																									
City: Lovington State: NM Zip: 88260		Attn: <i>Jeff</i>																									
Phone #: (575) 396-2378 Fax #: (575) 396-1429		Address:																									
Project #: <i>17251</i> Project Owner:		City:																									
Project Name: <i>ARUMS Deer Booster</i>		State: Zip:																									
Project Location:		Phone #:																									
Sampler Name: <i>Aaron Rios</i>		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			
<i>HZ30068</i>																											
<i>1 FS</i>	<i>1 @ 6 inches</i>	<i>X</i>				<i>X</i>							<i>1-5-22</i>		<i>X</i>	<i>X</i>	<i>X</i>										
<i>2 FS</i>	<i>2</i>																										
<i>3 FS</i>	<i>3</i>																										
<i>4 FS</i>	<i>4</i>																										
<i>5 FS</i>	<i>5</i>																										
<i>6 FS</i>	<i>6</i>																										
<i>7 FS</i>	<i>7</i>																										
<i>8 FS</i>	<i>8</i>																										
<i>9 FS</i>	<i>9</i>																										
<i>10 FS</i>	<i>10 @ 6 inches</i>																										
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Relinquished By: <i>Aaron Rios</i>		Date: <i>1-5-23</i>		Received By: <i>Laura...</i>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS:																	
Relinquished By:		Date:		Received By:		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																			
Delivered By: (Circle One)		Time: <i>7:50</i>		Time:		Sample Condition		CHECKED BY: (Initials)																			
Sampler - UPS - Bus - Other:		Date: <i>18.1°C / 17.5°C</i>		Time: <i>#113</i>		Cool Intact		Checked By: <i>JO</i>		Please email results to pm@etechenv.com.																	



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

January 10, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: ARUMS DEER BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 01/06/23 15:08.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: SW 3. (H230076-01)

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	01/08/2023	ND	2.03	101	2.00	6.92	
Toluene*	0.084	0.050	01/08/2023	ND	2.22	111	2.00	7.77	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.19	110	2.00	7.64	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.82	114	6.00	8.39	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 77.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: SW 4. (H230076-02)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2023	ND	2.03	101	2.00	6.92	
Toluene*	<0.050	0.050	01/08/2023	ND	2.22	111	2.00	7.77	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.19	110	2.00	7.64	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.82	114	6.00	8.39	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

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	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 73.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.2 % 49.1-148

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Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: SW 5. (H230076-03)

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	01/08/2023	ND	2.03	101	2.00	6.92	
Toluene*	<0.050	0.050	01/08/2023	ND	2.22	111	2.00	7.77	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.19	110	2.00	7.64	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.82	114	6.00	8.39	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 77.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 81.3 % 49.1-148

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Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: SW 6. (H230076-04)

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	01/08/2023	ND	2.03	101	2.00	6.92		
Toluene*	<0.050	0.050	01/08/2023	ND	2.22	111	2.00	7.77		
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.19	110	2.00	7.64		
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.82	114	6.00	8.39		
Total BTEX	<0.300	0.300	01/08/2023	ND						

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

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	01/09/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61		
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02		
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND						

Surrogate: 1-Chlorooctane 69.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 73.2 % 49.1-148

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Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: SW 7. (H230076-05)

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	01/08/2023	ND	2.03	101	2.00	6.92		
Toluene*	<0.050	0.050	01/08/2023	ND	2.22	111	2.00	7.77		
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.19	110	2.00	7.64		
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.82	114	6.00	8.39		
Total BTEX	<0.300	0.300	01/08/2023	ND						

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

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	01/09/2023	ND	448	112	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61		
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02		
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND						

Surrogate: 1-Chlorooctane 90.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.5 % 49.1-148

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Analytical Results For:

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 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: NW 3. (H230076-06)

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	01/08/2023	ND	2.03	101	2.00	6.92	
Toluene*	<0.050	0.050	01/08/2023	ND	2.22	111	2.00	7.77	
Ethylbenzene*	<0.050	0.050	01/08/2023	ND	2.19	110	2.00	7.64	
Total Xylenes*	<0.150	0.150	01/08/2023	ND	6.82	114	6.00	8.39	
Total BTEX	<0.300	0.300	01/08/2023	ND					

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

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	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 74.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 78.4 % 49.1-148

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Analytical Results For:

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Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: NW 4. (H230076-07)

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	01/09/2023	ND	2.11	105	2.00	4.88	
Toluene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	4.61	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	5.33	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.39	106	6.00	5.53	
Total BTEX	<0.300	0.300	01/09/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 65.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 68.8 % 49.1-148

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Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: NW 5. (H230076-08)

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	01/09/2023	ND	2.11	105	2.00	4.88	
Toluene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	4.61	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	5.33	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.39	106	6.00	5.53	
Total BTEX	<0.300	0.300	01/09/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 66.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.9 % 49.1-148

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Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: NW 6. (H230076-09)

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	01/09/2023	ND	2.11	105	2.00	4.88	
Toluene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	4.61	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	5.33	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.39	106	6.00	5.53	
Total BTEX	<0.300	0.300	01/09/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 78.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.4 % 49.1-148

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Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 16 @ 6INCHES (H230076-10)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	4.88	
Toluene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	4.61	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	5.33	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.39	106	6.00	5.53	
Total BTEX	<0.300	0.300	01/09/2023	ND					

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

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	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	189	94.6	200	1.61	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	178	89.0	200	1.02	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 71.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 76.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 17 @ 6INCHES (H230076-11)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	4.88	
Toluene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	4.61	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	5.33	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.39	106	6.00	5.53	
Total BTEX	<0.300	0.300	01/09/2023	ND					

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

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	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	193	96.4	200	1.34	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	189	94.3	200	0.717	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 93.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	01/06/2023	Sampling Date:	01/06/2023
Reported:	01/10/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 18 @ 6INCHES (H230076-12)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	4.88	
Toluene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	4.61	
Ethylbenzene*	<0.050	0.050	01/09/2023	ND	2.11	105	2.00	5.33	
Total Xylenes*	<0.150	0.150	01/09/2023	ND	6.39	106	6.00	5.53	
Total BTEX	<0.300	0.300	01/09/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	01/09/2023	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2023	ND	193	96.4	200	1.34	
DRO >C10-C28*	<10.0	10.0	01/09/2023	ND	189	94.3	200	0.717	
EXT DRO >C28-C36	<10.0	10.0	01/09/2023	ND					

Surrogate: 1-Chlorooctane 88.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.7 % 49.1-148

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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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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

January 12, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: ARUMS DEER BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 01/10/23 16:48.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

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:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: NW 7. (H230130-01)

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	01/12/2023	ND	2.12	106	2.00	2.61		
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37		
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02		
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43		
Total BTEX	<0.300	0.300	01/12/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	01/11/2023	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	01/11/2023	ND	166	82.8	200	12.0		
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8		
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND						

Surrogate: 1-Chlorooctane 93.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: NW 8. (H230130-02)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

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	01/11/2023	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	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 49.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 52.5 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: NW 9. (H230130-03)

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	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	01/11/2023	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	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 94.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 101 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: NW 10. (H230130-04)

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	01/12/2023	ND	2.12	106	2.00	2.61		
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37		
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02		
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43		
Total BTEX	<0.300	0.300	01/12/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	01/11/2023	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	01/11/2023	ND	166	82.8	200	12.0		
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8		
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND						

Surrogate: 1-Chlorooctane 78.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 83.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: EW 1. (H230130-05)

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	01/12/2023	ND	2.12	106	2.00	2.61		
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37		
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02		
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43		
Total BTEX	<0.300	0.300	01/12/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	01/11/2023	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	01/11/2023	ND	166	82.8	200	12.0		
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8		
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND						

Surrogate: 1-Chlorooctane 80.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 86.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: EW 2. (H230130-06)

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	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 86.8 % 48.2-134

Surrogate: 1-Chlorooctadecane 93.6 % 49.1-148

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Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: SW 8. (H230130-07)

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	01/12/2023	ND	2.12	106	2.00	2.61		
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37		
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02		
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43		
Total BTEX	<0.300	0.300	01/12/2023	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/11/2023	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0		
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8		
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND						

Surrogate: 1-Chlorooctane 96.1 % 48.2-134

Surrogate: 1-Chlorooctadecane 105 % 49.1-148

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Analytical Results For:

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 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 19. @ 6INCHES (H230130-08)

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	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

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	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 87.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.2 % 49.1-148

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Analytical Results For:

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 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 20. @ 1FT (H230130-09)

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	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 85.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 91.8 % 49.1-148

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Analytical Results For:

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 HOBBS NM, 88240
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Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: WW 2. (H230130-10)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 72.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 79.3 % 49.1-148

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Analytical Results For:

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 Fax To:

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: WW 3. (H230130-11)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 84.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.2 % 49.1-148

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Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: WW 4. (H230130-12)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 101 % 48.2-134

Surrogate: 1-Chlorooctadecane 111 % 49.1-148

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Analytical Results For:

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 HOBBS NM, 88240
 Fax To:

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 21. @ 6INCHES (H230130-13)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

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	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

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Analytical Results For:

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 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 22. @ 6INCHES (H230130-14)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

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	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 81.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 90.5 % 49.1-148

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Analytical Results For:

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 2617 W MARLAND
 HOBBS NM, 88240
 Fax To:

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 23. @ 4FT (H230130-15)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1440	16.0	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 94.4 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 24. @ 4FT (H230130-16)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1100	16.0	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 82.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.0 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 25. @ 4FT (H230130-17)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 88.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.8 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	01/10/2023	Sampling Date:	01/10/2023
Reported:	01/12/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Shalyn Rodriguez
Project Location:	MEWBOURNE		

Sample ID: FS 26. @ 4FT (H230130-18)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	2.12	106	2.00	2.61	
Toluene*	<0.050	0.050	01/12/2023	ND	2.18	109	2.00	1.37	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.19	109	2.00	1.02	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.61	110	6.00	1.43	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	01/11/2023	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2023	ND	166	82.8	200	12.0	
DRO >C10-C28*	<10.0	10.0	01/11/2023	ND	166	82.8	200	16.8	
EXT DRO >C28-C36	<10.0	10.0	01/11/2023	ND					

Surrogate: 1-Chlorooctane 84.0 % 48.2-134

Surrogate: 1-Chlorooctadecane 92.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Etech Environmental & Safety Solutions, Inc.				BILL TO				ANALYSIS REQUEST																		
Project Manager: <i>Lance Crenshaw</i>				P.O. #:				Chloride TPH (8015M) BTEX (8021B)																		
Address: P.O. Box 301				Company: <i>Mewburn</i>																						
City: Lovington		State: NM		Zip: 88260		Attn: <i>Jeff</i>																				
Phone #: (575) 396-2378		Fax #: (575) 396-1429		Address:																						
Project #: <i>19251</i>		Project Owner:		City:																						
Project Name: <i>ARUMS Deer Booster</i>				State:		Zip:																				
Project Location:				Phone #:																						
Sampler Name: <i>Arach Kios</i>				Fax #:																						
FOR LAB USE ONLY																										
Lab I.D.		Sample I.D.		GIRAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV.		SAMPLING														
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
<i>H230130</i>																										
<i>11</i>		<i>WW 3.</i>		<i>X</i>		<i>X</i>							<i>1-10-23</i>		<i>X</i>	<i>X</i>	<i>X</i>									
<i>12</i>		<i>WW 4.</i>		<i>X</i>		<i>X</i>									<i>✓</i>	<i>X</i>	<i>X</i>									
<i>13</i>		<i>FS 21 @ 6 inches</i>		<i>X</i>		<i>X</i>									<i>X</i>	<i>X</i>	<i>X</i>									
<i>14</i>		<i>FS 22 @ 6 inches</i>		<i>X</i>		<i>X</i>									<i>X</i>	<i>X</i>	<i>X</i>									
<i>15</i>		<i>FS 23 @ 4 Ft</i>		<i>X</i>		<i>X</i>									<i>X</i>	<i>X</i>	<i>X</i>									
<i>16</i>		<i>FS 24 @ 4 Ft</i>		<i>X</i>		<i>X</i>									<i>X</i>	<i>✓</i>	<i>X</i>									
<i>17</i>		<i>FS 25 @ 4 Ft</i>		<i>X</i>		<i>X</i>									<i>X</i>	<i>X</i>	<i>X</i>									
<i>18</i>		<i>FS 26 @ 4 Ft</i>		<i>X</i>		<i>X</i>							<i>HOB</i>		<i>X</i>	<i>X</i>	<i>X</i>									
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Relinquished By: <i>Arach Kios</i>				Date: <i>1-10-23</i>		Received By: <i>Shodkiewicz</i>				Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:														
				Time: <i>1648</i>						Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:														
Relinquished By:				Date:		Received By:				REMARKS:																
				Time:						Please email results to pm@etechenv.com.																
Delivered By: (Circle One)				Sample Condition		CHECKED BY:																				
Sampler - UPS - Bus - Other: <i>2L2: C.O.U. #113</i>				Cool Intact		(Initials)																				
				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<i>OK</i>																				



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

January 16, 2023

LANCE CRENSHAW

Etech Environmental & Safety Solutions

2617 W MARLAND

HOBBS, NM 88240

RE: ARUMS DEER BOOSTER

Enclosed are the results of analyses for samples received by the laboratory on 01/11/23 10:50.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, 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:	01/11/2023	Sampling Date:	01/11/2023
Reported:	01/16/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 27 . @ 4FT (H230135-01)

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	01/12/2023	ND	1.97	98.7	2.00	3.69	
Toluene*	<0.050	0.050	01/12/2023	ND	2.03	102	2.00	1.05	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.02	101	2.00	1.84	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.12	102	6.00	1.67	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5840	16.0	01/11/2023	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	01/12/2023	ND	175	87.5	200	12.4	
DRO >C10-C28*	13.6	10.0	01/12/2023	ND	166	82.8	200	17.8	
EXT DRO >C28-C36	<10.0	10.0	01/12/2023	ND					

Surrogate: 1-Chlorooctane 87.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 104 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	01/11/2023	Sampling Date:	01/11/2023
Reported:	01/16/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 28 . @ 4FT (H230135-02)

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/12/2023	ND	1.97	98.7	2.00	3.69	
Toluene*	<0.050	0.050	01/12/2023	ND	2.03	102	2.00	1.05	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.02	101	2.00	1.84	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.12	102	6.00	1.67	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4080	16.0	01/11/2023	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	01/12/2023	ND	175	87.5	200	12.4	
DRO >C10-C28*	<10.0	10.0	01/12/2023	ND	166	82.8	200	17.8	
EXT DRO >C28-C36	<10.0	10.0	01/12/2023	ND					

Surrogate: 1-Chlorooctane 87.3 % 48.2-134

Surrogate: 1-Chlorooctadecane 102 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	01/11/2023	Sampling Date:	01/11/2023
Reported:	01/16/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 29 . @ 4FT (H230135-03)

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	01/12/2023	ND	1.97	98.7	2.00	3.69	
Toluene*	<0.050	0.050	01/12/2023	ND	2.03	102	2.00	1.05	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.02	101	2.00	1.84	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.12	102	6.00	1.67	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	01/11/2023	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	01/12/2023	ND	175	87.5	200	12.4	
DRO >C10-C28*	13.5	10.0	01/12/2023	ND	166	82.8	200	17.8	
EXT DRO >C28-C36	<10.0	10.0	01/12/2023	ND					

Surrogate: 1-Chlorooctane 91.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 106 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/11/2023	Sampling Date:	01/11/2023
Reported:	01/16/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 30 . @ 4FT (H230135-04)

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	01/12/2023	ND	1.97	98.7	2.00	3.69	
Toluene*	<0.050	0.050	01/12/2023	ND	2.03	102	2.00	1.05	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.02	101	2.00	1.84	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.12	102	6.00	1.67	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	01/11/2023	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	01/12/2023	ND	175	87.5	200	12.4	
DRO >C10-C28*	<10.0	10.0	01/12/2023	ND	166	82.8	200	17.8	
EXT DRO >C28-C36	<10.0	10.0	01/12/2023	ND					

Surrogate: 1-Chlorooctane 100 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/11/2023	Sampling Date:	01/11/2023
Reported:	01/16/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 31 . @ 4FT (H230135-05)

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	01/12/2023	ND	1.99	99.6	2.00	1.07	
Toluene*	<0.050	0.050	01/12/2023	ND	2.19	110	2.00	1.12	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.14	107	2.00	0.440	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.59	110	6.00	0.724	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4720	16.0	01/11/2023	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	01/12/2023	ND	175	87.5	200	12.4	
DRO >C10-C28*	<10.0	10.0	01/12/2023	ND	166	82.8	200	17.8	
EXT DRO >C28-C36	<10.0	10.0	01/12/2023	ND					

Surrogate: 1-Chlorooctane 95.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/11/2023	Sampling Date:	01/11/2023
Reported:	01/16/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 32 . @ 4FT (H230135-06)

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	01/12/2023	ND	1.99	99.6	2.00	1.07	
Toluene*	<0.050	0.050	01/12/2023	ND	2.19	110	2.00	1.12	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.14	107	2.00	0.440	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.59	110	6.00	0.724	
Total BTEX	<0.300	0.300	01/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3920	16.0	01/11/2023	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	01/12/2023	ND	175	87.5	200	12.4	
DRO >C10-C28*	<10.0	10.0	01/12/2023	ND	166	82.8	200	17.8	
EXT DRO >C28-C36	<10.0	10.0	01/12/2023	ND					

Surrogate: 1-Chlorooctane 103 % 48.2-134

Surrogate: 1-Chlorooctadecane 121 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/11/2023	Sampling Date:	01/11/2023
Reported:	01/16/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: FS 33 . @ 4FT (H230135-07)

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	01/12/2023	ND	1.99	99.6	2.00	1.07	
Toluene*	<0.050	0.050	01/12/2023	ND	2.19	110	2.00	1.12	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.14	107	2.00	0.440	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.59	110	6.00	0.724	
Total BTEX	<0.300	0.300	01/12/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5120	16.0	01/11/2023	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	01/12/2023	ND	175	87.5	200	12.4	
DRO >C10-C28*	<10.0	10.0	01/12/2023	ND	166	82.8	200	17.8	
EXT DRO >C28-C36	<10.0	10.0	01/12/2023	ND					

Surrogate: 1-Chlorooctane 106 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	01/11/2023	Sampling Date:	01/11/2023
Reported:	01/16/2023	Sampling Type:	Soil
Project Name:	ARUMS DEER BOOSTER	Sampling Condition:	** (See Notes)
Project Number:	17251	Sample Received By:	Tamara Oldaker
Project Location:	MEWBOURNE		

Sample ID: SW 9. (H230135-08)

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	01/12/2023	ND	1.99	99.6	2.00	1.07	
Toluene*	<0.050	0.050	01/12/2023	ND	2.19	110	2.00	1.12	
Ethylbenzene*	<0.050	0.050	01/12/2023	ND	2.14	107	2.00	0.440	
Total Xylenes*	<0.150	0.150	01/12/2023	ND	6.59	110	6.00	0.724	
Total BTEX	<0.300	0.300	01/12/2023	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	01/11/2023	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	01/12/2023	ND	175	87.5	200	12.4	
DRO >C10-C28*	<10.0	10.0	01/12/2023	ND	166	82.8	200	17.8	
EXT DRO >C28-C36	<10.0	10.0	01/12/2023	ND					

Surrogate: 1-Chlorooctane 104 % 48.2-134

Surrogate: 1-Chlorooctadecane 117 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager

Appendix D

Photographic Log

Photographic Log

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

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

Photographic Log

Photo Number: 3	 <p>13Dec22 11:00 Ad-hoc Sp2 Antelope Rd, Jal NM 88252, US © 13-Dec-22 11:00:21</p>
Photo Direction: West-Southwest	
Photo Description: View of the affected area.	

Photo Number: 4	 <p>13Dec22 11:00 Ad-hoc Sp2 Antelope Rd, Jal NM 88252, US © 13-Dec-22 11:00:43</p>
Photo Direction: West	
Photo Description: View of the affected area.	

Photographic Log

Photo Number: 5	 <p>Network: Jan 9, 2023 at 7:55:39 AM MST Local: Jan 9, 2023 at 7:55:39 AM MST N 32° 17' 2.100", W 103° 28' 23.087" Antelope Rd Jal NM 88252 United States</p>
Photo Direction: South	
Photo Description: View of the excavated area.	

Photo Number: 6	 <p>Network: Jan 9, 2023 at 7:57:31 AM MST Local: Jan 9, 2023 at 7:57:31 AM MST N 32° 17' 2.336", W 103° 28' 26.951" Jal NM 88252 United States</p>
Photo Direction: South	
Photo Description: View of the excavated area.	

Photographic Log

Photo Number: 7	
Photo Direction: East-Southeast	
Photo Description: View of the excavated area.	

Photo Number: 8	
Photo Direction: North	
Photo Description: View of the excavated area.	

Photographic Log

Photo Number: 9	 <p>Network: Jan 12, 2023 at 2:56:06 PM MST Local: Jan 12, 2023 at 2:56:06 PM MST N 32° 17' 1.476", W 103° 28' 21.790" Antelope Rd Jal NM 88252 United States</p>
Photo Direction: South	
Photo Description: View of the excavated area.	

Photo Number: 10	 <p>Network: Jan 12, 2023 at 2:58:38 PM MST Local: Jan 12, 2023 at 2:58:38 PM MST N 32° 17' 1.060", W 103° 28' 21.172" Antelope Rd Jal NM 88252 United States</p>
Photo Direction: West-Northwest	
Photo Description: View of the excavated area.	

Photographic Log

Photo Number: 11	 <p>1/18/23, 9:11 AM +32.283484,-103.472651 NM,Jal,Antelope Rd</p>
Photo Direction: East	
Photo Description: View of the remediated area after backfill and regrading.	

Photo Number: 12	 <p>1/18/23, 9:12 AM +32.283484,-103.472651 NM,Jal,Antelope Rd</p>
Photo Direction: North	
Photo Description: View of the remediated area after backfill and regrading.	

Photographic Log

Photo Number: 13	 <p>1/18/23, 9:12 AM +32.283484,-103.472651 NM,Jal,Antelope Rd</p>
Photo Direction: Northwest	
Photo Description: View of the remediated area after backfill and regrading.	

Photo Number: 14	 <p>1/18/23, 9:12 AM +32.283655,-103.472720 NM,Jal,Antelope Rd</p>
Photo Direction: West-Northwest	
Photo Description: View of the remediated area after backfill and regrading.	

Appendix E

Regulatory Correspondence

From: [Lance Crenshaw](#)
To: [Enviro, OCD, EMNRD](#)
Cc: [Connor Walker](#); jbroom@mewbourne.com; [Ben Arguijo](#); [Joel Lowry](#)
Subject: Confirmation Sampling Notification-napp2236030437
Date: Tuesday, January 10, 2023 10:22:06 AM

This email serves as notice that Etech intends to collect excavation confirmation soil samples on January 13 through January 16 from the following locations/reportable release sites:

Mewbourne Oil Co –ARWMS Deer Booster- napp2236030437

If you have any questions or need any additional information, please contact Lance Crenshaw by phone (575-631-2532) or email lance@etechenv.com.

Lance Crenshaw
Etech Environmental & Safety Solutions
575-631-2532

From: [Hamlet, Robert, EMNRD](#)
To: [Ben Arguijo](#)
Cc: [Connor Walker](#); [Jeff Broom](#); [Lance Crenshaw](#); [Bratcher, Michael, EMNRD](#); [Nobui, Jennifer, EMNRD](#); [Harimon, Jocelyn, EMNRD](#)
Subject: (Extension Approval) nAPP2236030437 - ARWMS Deer Booster - Mewbourne
Date: Monday, March 13, 2023 8:43:36 AM
Attachments: [image003.png](#)

RE: Incident #**NAPP2236030437**

Ben,

Your request for an extension to **March 15th, 2023** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave. | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
<http://www.emnrd.state.nm.us/OCD/>



From: Ben Arguijo <bena@etechenv.com>
Sent: Sunday, March 12, 2023 8:48 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; ocd.environmental@state.nm.us; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: Connor Walker <cwalker@mewbourne.com>; Jeff Broom <jbroom@mewbourne.com>; Lance Crenshaw <lance@etechenv.com>
Subject: [EXTERNAL] nAPP2236030437 - ARWMS Deer Booster - Extension Request

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Dear NMOCD Environmental Bureau,

Mewbourne Oil Company (Mewbourne) has contracted Etech Environmental & Safety Solutions, Inc. (Etech), to conduct remediation activities for the release known as the ARWMS Deer Booster (NMOCD Incident #nAPP2236030437) located in Lea County. Pursuant to NMOCD regulations, a work plan or closure report is due for the release **today, March 12, 2023**. The release has been remediated to the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standards, and a closure report has been prepared documenting remediation activities conducted at the site.

That said, I apparently mis-recorded the due date for submittal of the closure report, and Mewbourne has not yet had an opportunity to review it. In consideration of this, Etech, on behalf of Mewbourne, requests a **3-day extension** until **Wednesday, March 15, 2023**, to allow Mewbourne time to review the closure report, make any required revisions, and submit it to the NMOCD through the online payment portal.

If you have any questions or need any additional information, please do not hesitate to contact me by phone or email.

Thank you for your time and consideration.

Respectfully,
Ben J. Arguijo

Ben J. Arguijo
Project Manager



6309 Indiana Ave., Ste. D
Lubbock, TX 79413
(432) 813-1592

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 196866

CONDITIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 196866
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved.	3/21/2023