

Incident ID	nAPP2035647738
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?	> 100 (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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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

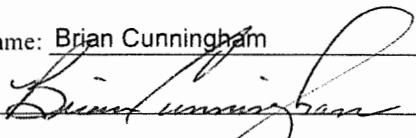
Form C-141

Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2035647738
District RP	
Facility ID	
Application ID	

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

Printed Name: Brian CunninghamTitle: Production ForemanSignature: Date: 1/21/21email: bcunningham@legacylp.comTelephone: 432-234-9450**OCD Only**

Received by: _____

Date: _____

Incident ID	nAPP2035647738
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

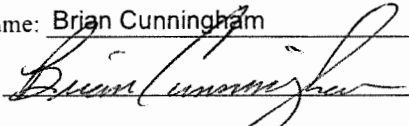
Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

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

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

Printed Name: Brian Cunningham

Title: Production Foreman

Signature: 

Date: 1/21/21

email: bcunningham@legacylp.com

Telephone: 432-234-9450

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____

Date: _____

Site Assessment Report and Proposed Remediation Workplan

Legacy Reserves Operating, LP Lea South Tank Battery

Lea County, New Mexico
Unit Letter G, Section 24, Township 20 South, Range 34 East
Latitude 32.560443 North, Longitude 103.511642 West
NMOCD Reference No. nAPP2035647738

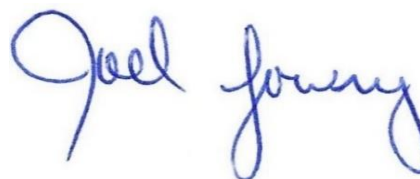
Prepared By:

Etech Environmental & Safety Solutions, Inc.

3100 Plains Highway
Lovington, New Mexico 88260



Matthew Grieco



Joel W. Lowry



Midland • San Antonio • Lubbock • Lovington • Lafayette

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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Legacy Reserves Operating, LP, has prepared this report for the release site known as the Lea South Tank Battery (henceforth 'Site'). Details of the release are summarized below:

Location of Release Source

Latitude: 32.560443 Longitude: -103.511642

Provided GPS are in WGS84 format.

Site Name: <u>Lea South Tank Battery</u>	Site Type: <u>Tank Battery</u>
Date Release Discovered: <u>12/7/2020</u>	API # (if applicable): <u>30-025-29381</u>

Unit Letter	Section	Township	Range	County
G	24	20S	34E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name S & S, Inc.)

Nature and Volume of Release

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) <u>5</u>	Volume Recovered (bbls) <u>0</u>
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water > 10,000 mg/L?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Natural Gas	Volume Released (Mcf) <u>250</u>	Volume Recovered (Mcf) <u>0</u>
<input type="checkbox"/> Other (describe)	Volume/Weight Released	Volume/Weight Recovered

Cause of Release:

Top of the gasket on heater treater blew out; the gas was ignited by the other on-site heater treaters.

Initial Response

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

Previously submitted portions of the NMOCD Form C-141 are available on 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 Site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

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

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

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

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

Probable Depth to Groundwater	Constituent	Method	Closure Criteria	Reclamation Standard*
> 100'	Chloride	EPA 300.0 or SM4500 Cl B	20,000 mg/kg	600 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	2,500 mg/kg	100 mg/kg
	DRO + GRO	EPA SW-846 Method 8015M	1,000 mg/kg	-
	BTEX	EPA SW-846 Methods 8021b or 8260b	50 mg/kg	50 mg/kg
	Benzene	EPA SW-846 Methods 8021b or 8260b	10 mg/kg	10 mg/kg

* The NMOCD Reclamation Standard applies only to the top 4" of soil in non-production areas.

4.0 INITIAL SITE ASSESSMENT

On January 7, 2021, Etech conducted an initial site assessment. During the initial site assessment, a series of hand-augered soil bores were advanced within the release margins in an effort to determine the vertical extent of soil impacts. In addition, hand-augered soil bores were advanced at the inferred edges of the affected area in an effort to determine the horizontal extent of soil impacts. During the advancement of the hand-augered soil bores, field soil samples were collected and field-screened for the presence of Volatile Organic Compounds utilizing a Photoionization Detector and concentrations of chloride utilizing a Hach Quantab ® chloride test kit.

Based on field observations and field test data, ten (10) delineation soil samples (SP1 @ Surface, SP1 @ 1'R, S2 @ Surface, SP2 @ 1', SP3 @ Surface, SP3 @ 1', NH, EH, WH, and SH) were submitted to a certified commercial laboratory for analysis of BTEX, TPH, and chloride. Based on laboratory analytical results, soil was not affected above the NMOCD Closure Criteria beyond one (1) foot below ground surface (BGS), and the horizontal extent of affected soil impacted above the NMOCD Closure Criteria was adequately defined.

A site and sample location map is provided as Figure 3. Field data and soil profile logs are provided as Appendix B. A soil chemistry table is provided as Table 1. Laboratory analytical reports are provided in Appendix C.

5.0 PROPOSED REMEDIATION PLAN

Based on laboratory analytical results, site characteristics, and field observations made during the initial site assessment, Legacy Reserves Operating, LP, proposes the following remediation activities designed to advance the Site toward an approved

- Utilizing mechanical equipment and/or hand tools, excavate impacted soil affected above the NMOCD Closure Criteria characterized by sample point SP1 @ Surface to an estimated depth of one (1) foot BGS.
- The sidewalls of the excavated area will be advanced until laboratory analytical results indicate BTEX, TPH, and chloride concentrations are below the NMOCD Closure Criteria or to the maximum extent practicable.
- Excavated soil will be transported to an NMOCD-permitted surface waste facility for disposal.
- Upon receiving laboratory analytical results from confirmation soil samples, backfill the excavated area with locally sourced, non-impacted “like” material.
- Any impacted soil affected above the NMOCD Closure Criteria remaining in-situ adjacent to or underneath the aboveground storage tanks, pipelines, electrical panels, pumps, and/or other on-site equipment in the area characterized by SP1 @ Surface will be remediated upon abandoning and decommissioning the facility.
- Upon completion of remediation activities, a *Remediation Summary and Deferral Request* will be prepared detailing field activities, laboratory analytical results from confirmation soil samples, and a more exact volume of impacted soil remaining in-situ, if any.

6.0 SAMPLING PLAN

Upon completion of excavation activities, representative five-point composite confirmation soil samples will be collected from the excavation sidewalls in each cardinal direction, representing no more than 50 linear feet. A minimum of one (1) representative five-point composite confirmation soil sample will be collected from the base of the excavated area representing every 500 square feet. Additional, discrete grab samples will be collected from wet or visibly stained areas inferred to have been affected by the release, as necessary.

7.0 TIMELINE AND ESTIMATED VOLUME OF SOIL TO BE REMEDIATED

Remediation activities are expected to be completed within 90 days of receiving necessary approval(s) of the *Site Assessment Summary and Proposed Remediation Workplan*. Based on laboratory analytical results, site characteristics, and field observations made during the initial site assessment, it is estimated that approximately 176 cubic yards of impacted soil is in need of removal.

8.0 RESTORATION, RECLAMATION, AND RE-VEGETATION PLAN

Areas affected by remediation and closure activities will be substantially restored to the condition that existed prior to the release. Excavated areas will be backfilled with locally sourced, non-impacted "like" material placed at or near original relative positions. The affected area will be contoured and compacted to fit the needs of the facility.

9.0 LIMITATIONS

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

This report has been prepared for the benefit of Legacy Reserves Operating, LP. Use of the information contained in this report is prohibited without the consent of Etech and/or Legacy Reserves Operating, LP.

10.0 DISTRIBUTION

Legacy Reserves Operating, LP

303 W. Wall St.

Midland, TX 79701

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division, District 1

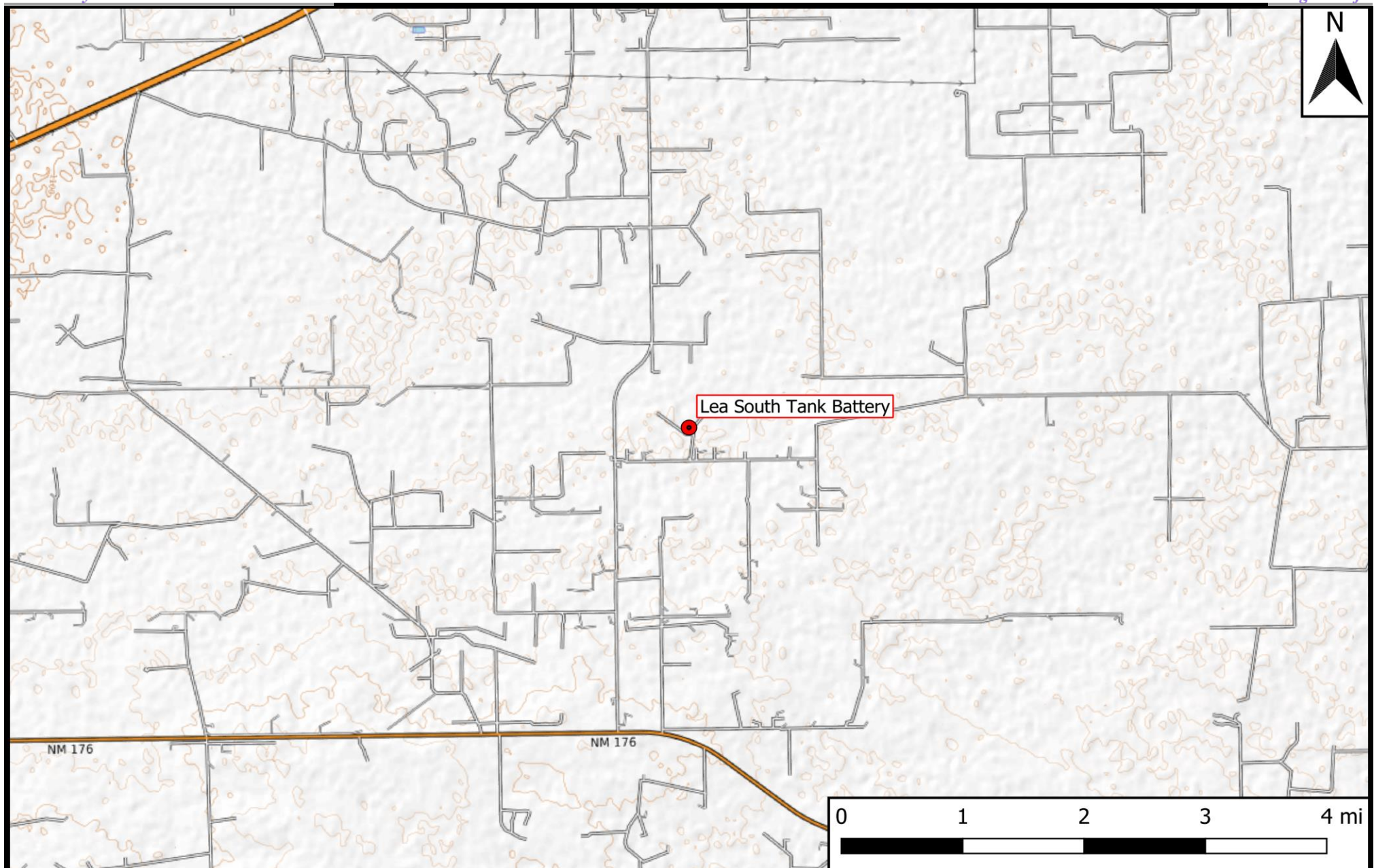
1220 South St. Francis Drive

Santa Fe, NM 87505

(Electronic Submission)

Figure 1

Topographic Map

**Legend**

● Site Location

Figure 1

Topographic Map
Legacy Reserves Operating, LP
Lea South Tank Battery
GPS: 32.560443, -103.511642
Lea County



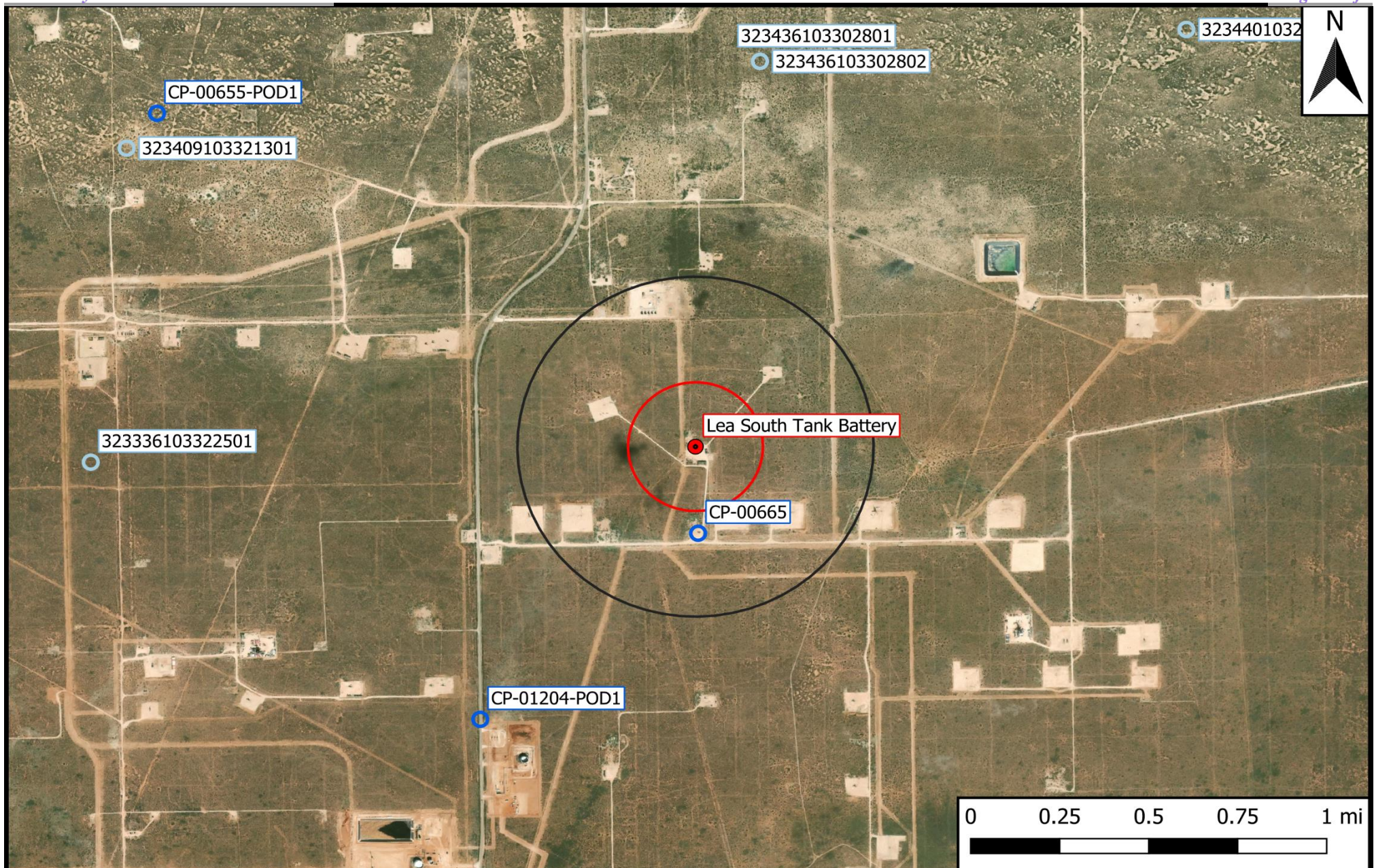
Drafted: mag

Checked: jwl

Date: 12/17/20

Figure 2

Aerial Proximity Map



Legend	 1000 Ft Radius
● Site Location	 0.5 Mi Radius
○ Well - NMOSE	 1% Annual Flood Chance
○ Well - USGS	 Lake/Freshwater Pond
 High Karst	 Emergent/Forested Wetlands
 Potash Mine Workings	 Riverine

Figure 2
Aerial Proximity Map
Legacy Reserves Operating, LP
Lea South Tank Battery
GPS: 32.560443, -103.511642
Lea County

eTECH
Environmental & Safety Solutions, Inc.

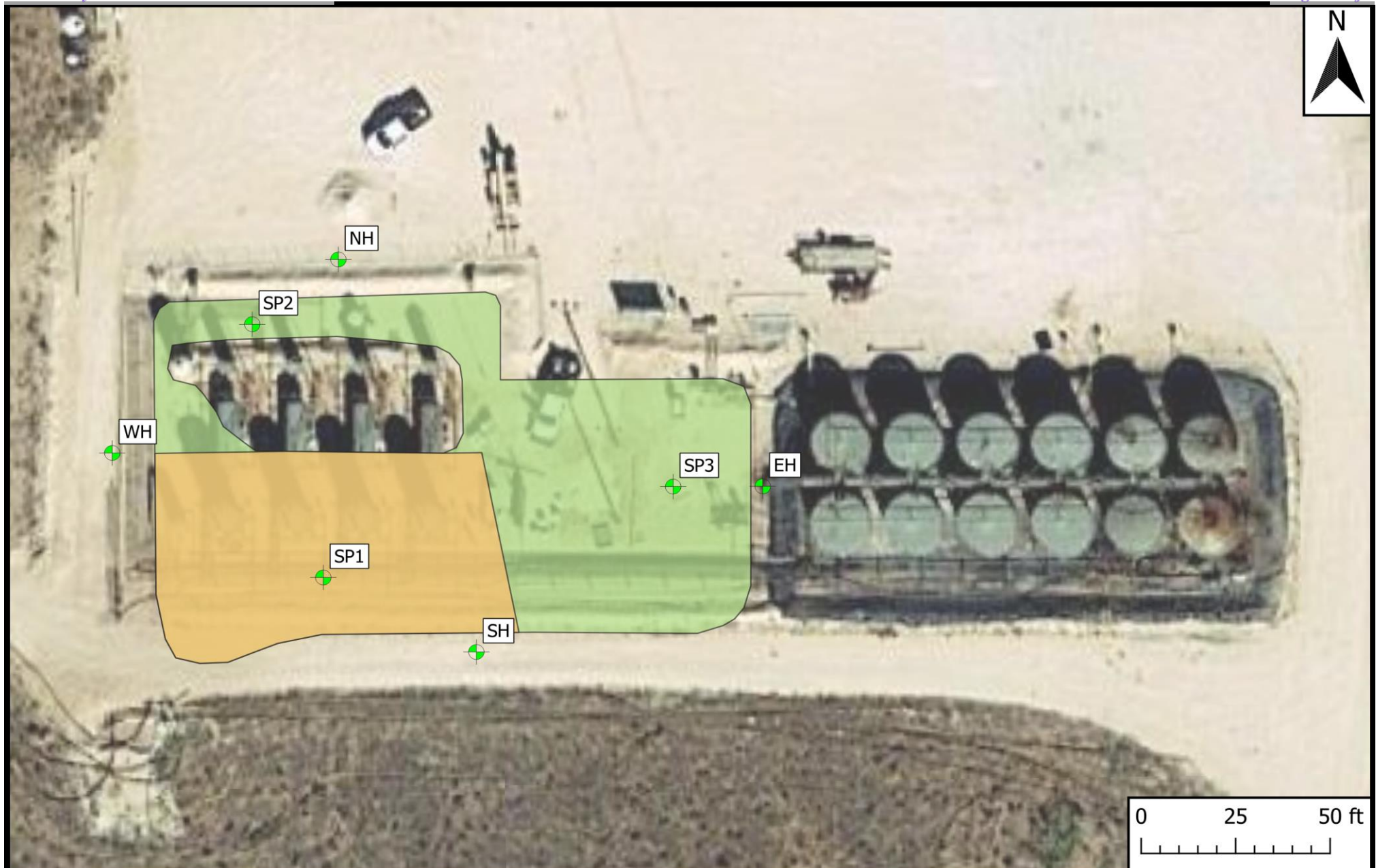
Drafted: bja

Checked: jwl

Date: 1/21/21

Figure 3

Site and Sample Location Map



Legend

- Sample Point
- Spill Area - 11,150 Sq Ft
- Proposed Excavation - 4,754 Sq Ft

Figure 3

Site and Sample Location Map
 Legacy Reserves Operating, LP
 Lea South Tank Battery
 GPS: 32.560443, -103.511642
 Lea County



Drafted: mag

Checked: jwl

Date: 1/20/21

Table 1
Concentrations of BTEX, TPH, and/or Chloride in Soil

Table 1 Concentrations of BTEX, TPH, and Chloride in Soil Legacy Reserves Operating, LP Lea South Tank Battery NMOCD Ref. #: nAPP2035647738											
NMOCD Closure Criteria				10	50	-	-	1,000	-	2,500	20,000
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth	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)
SP1 @ Surface	1/7/2021	0'	In-Situ	0.207	4.04	327	6,400	6,730	258	6,990	9,890
SP1 @ 1'R	1/7/2021	1'	In-Situ	0.00256	0.0674	<50.0	749	749	130	879	12,000
S2 @ Surface	1/7/2021	0'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	19,400
SP2 @ 1'	1/7/2021	1'	In-Situ	<0.00200	<0.00200	<49.9	84.0	84.0	<49.9	84.0	428
SP3 @ Surface	1/7/2021	0'	In-Situ	<0.00198	<0.00198	<50.0	945	945	175	1,120	3,480
SP3 @ 1'	1/7/2021	1'	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	199
NH	1/7/2021	1'	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	30.3
EH	1/7/2021	1'	In-Situ	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	36.6
WH	1/7/2021	1'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	8.54
SH	1/7/2021	1'	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	24.2

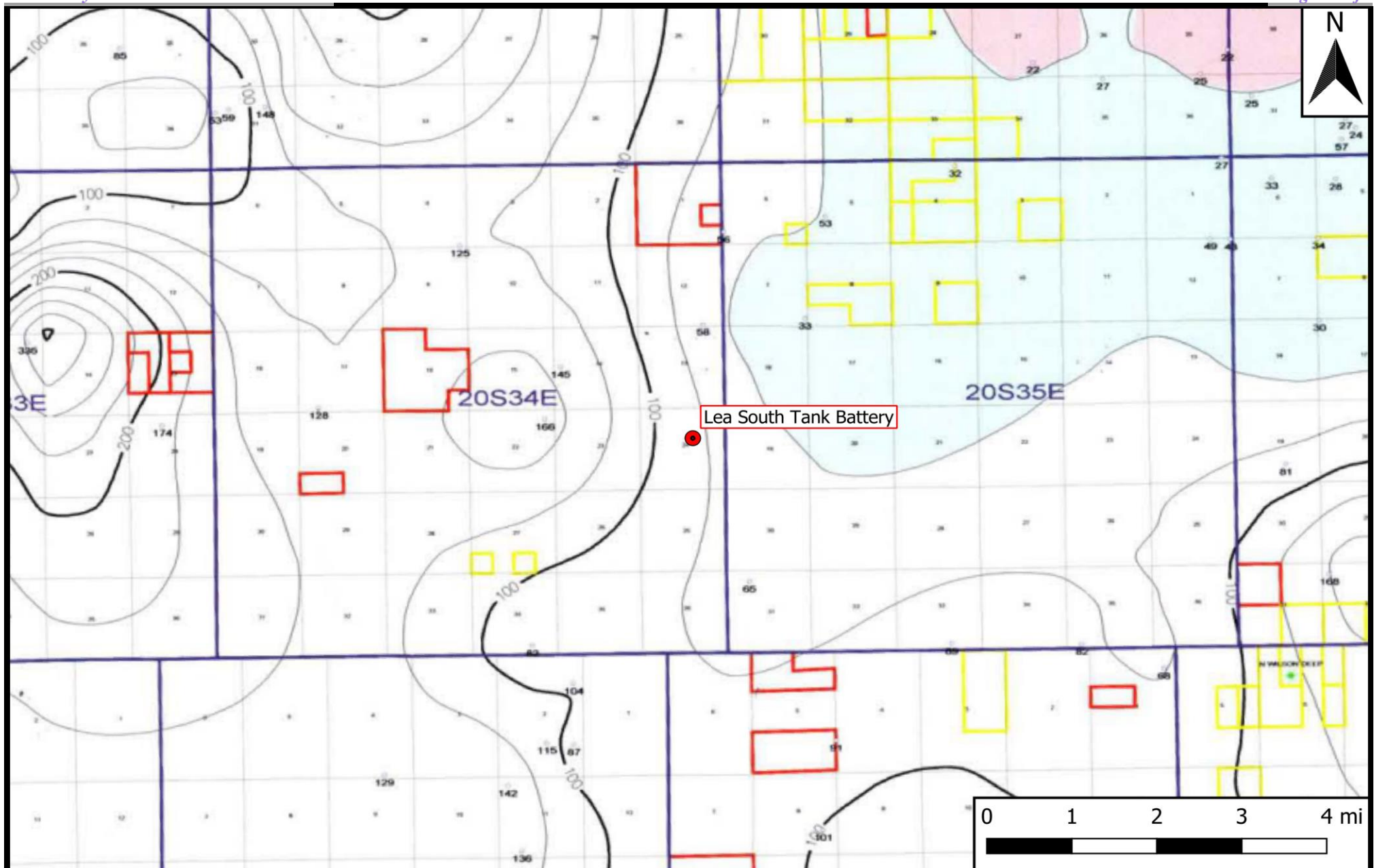
NOTES:

- = Sample not analyzed for that constituent.

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Appendix A

Depth to Groundwater Information



Legend

● Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
 Legacy Reserves Operating, LP
 Lea South Tank Battery
 GPS: 32.560443, -103.511642
 Lea County

eTECH
 Environmental & Safety Solutions, Inc.

Drafted: mag

Checked: jwl

Date: 12/17/20



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
CP.00665		CP	LE	1	4	24	20S	34E		639740	3603128*	408	698	270	428

Average Depth to Water: **270 feet**

Minimum Depth: **270 feet**

Maximum Depth: **270 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 639728.18

Northing (Y): 3603536.19

Radius: 804.67

*UTM location was derived from PLSS - see Help

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.

12/17/20 9:39 AM


WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00665	1	4	24	20S	34E	639740	3603128*	

x

Driller License: 421 **Driller Company:** GLENN'S WATER WELL SERVICE

Driller Name: GLENN, CLARK A."CORKY" (LD)

Drill Start Date: 05/25/1984 **Drill Finish Date:** 05/28/1984 **Plug Date:**

Log File Date: 06/11/1984 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 13 GPM

Casing Size: 6.63 **Depth Well:** 698 feet **Depth Water:** 270 feet

x

Water Bearing Stratifications:	Top	Bottom	Description
	364	396	Sandstone/Gravel/Conglomerate

x

Casing Perforations:	Top	Bottom
	360	420

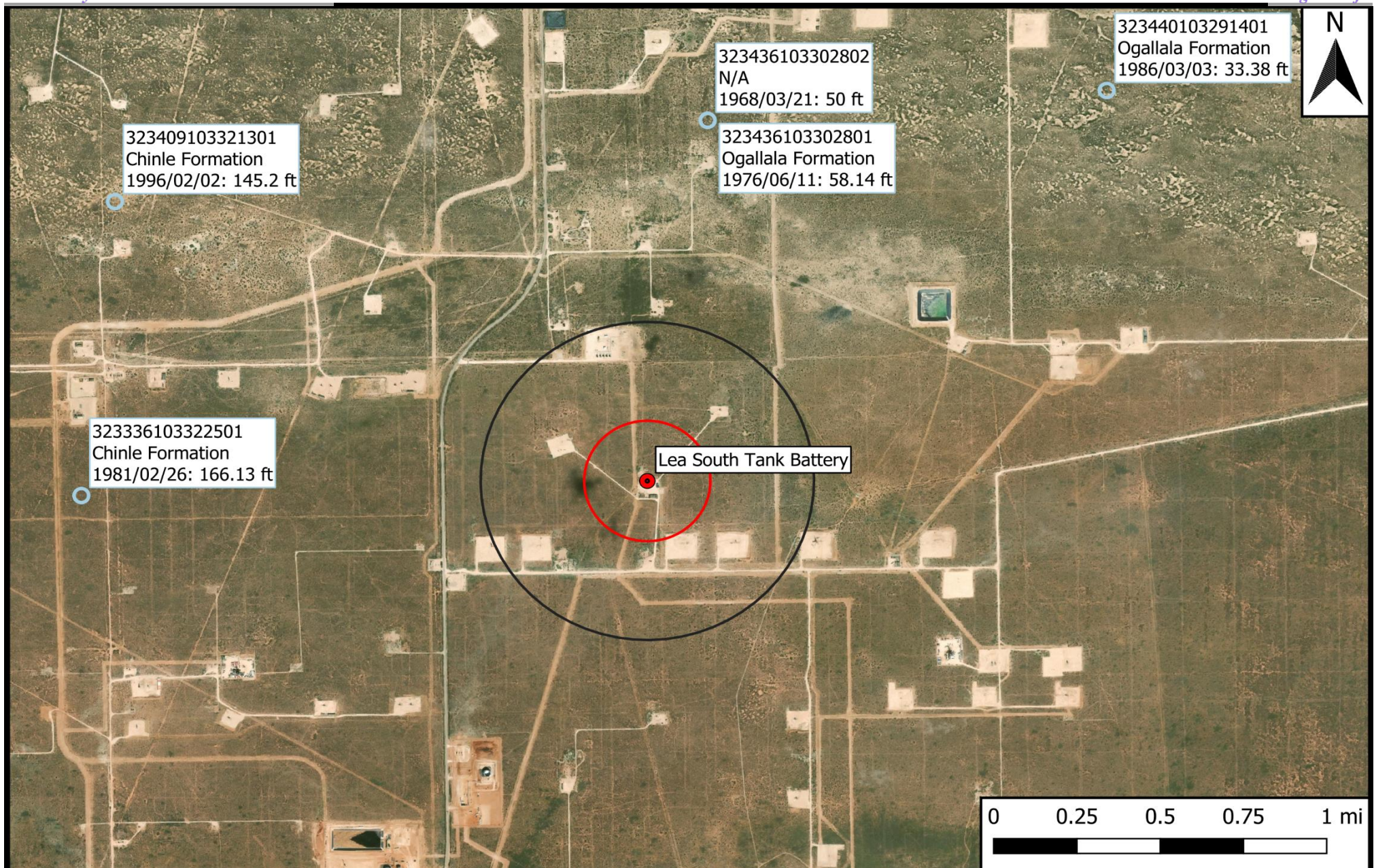
x

*UTM location was derived from PLSS - see Help

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.

12/17/20 9:39 AM

POINT OF DIVERSION SUMMARY



Legend

- Site Location
- Well - USGS
- 1000 Ft Radius
- 0.5 Mi Radius

Figure 5

USGS Well Proximity Map
Legacy Reserves Operating, LP
Lea South Tank Battery
GPS: 32.560443, -103.511642
Lea County

eTECH
Environmental & Safety Solutions, Inc.

Drafted: mag

Checked: jwl

Date:

1/20/21



USGS Home
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Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:
Groundwater ▼

Geographic Area:
United States ▼

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- [Full News](#)

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 323336103322501

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

USGS 323336103322501 20S.34E.22.222333

Available data for this site

Groundwater: Field measurements ▼

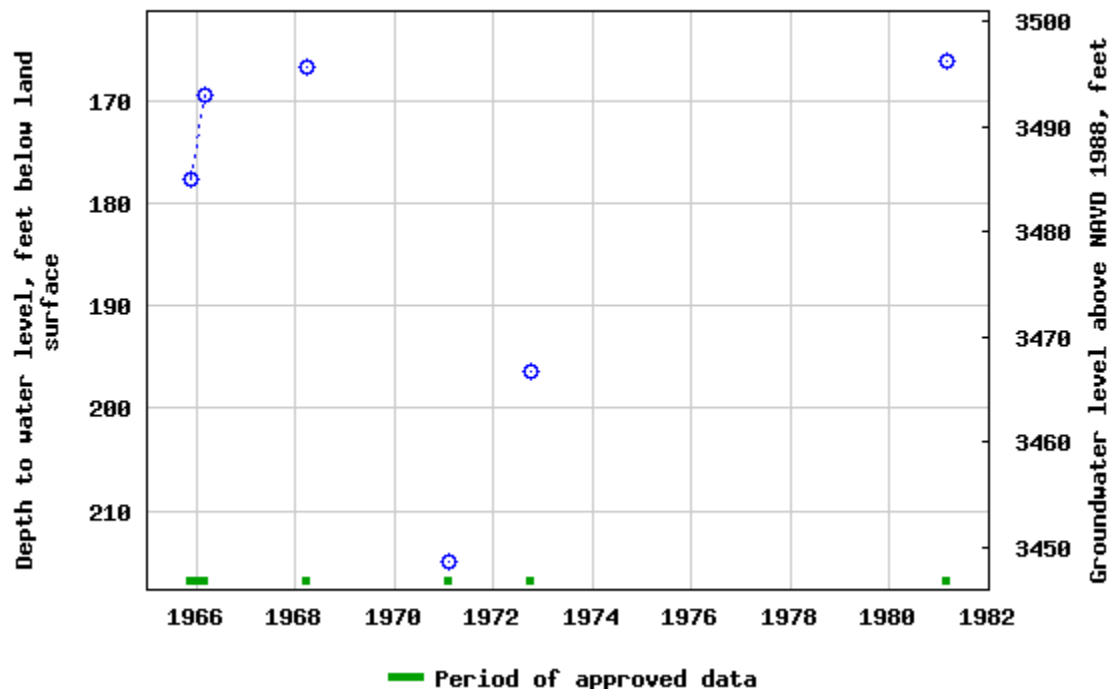
GO

Lea County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°33'36", Longitude 103°32'25" NAD27
Land-surface elevation 3,663 feet above NAVD88
The depth of the well is 250 feet below land surface.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

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

USGS 323336103322501 20S.34E.22.222333



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

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Title: Groundwater for USA: Water Levels

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



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

Page Last Modified: 2020-12-17 11:32:40 EST

4.63 0.61 nadww01



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National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

▼

Geographic Area:

United States

▼

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Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 323409103321301

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

USGS 323409103321301 20S.34E.14.13343

Available data for this site

Groundwater: Field measurements

▼

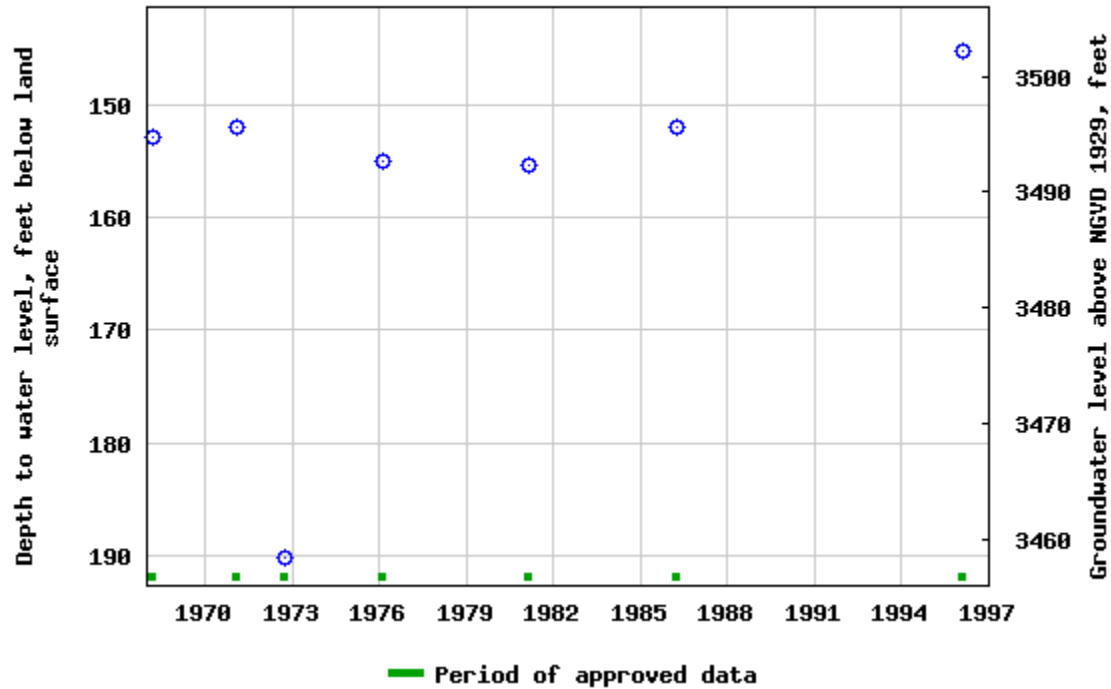
GO

Lea County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°34'24", Longitude 103°32'18" NAD27
Land-surface elevation 3,648.00 feet above NGVD29
The depth of the well is 230 feet below land surface.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

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

USGS 323409103321301 20S.34E.14.13343



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Title: Groundwater for USA: Water Levels

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



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4.5 0.6 nadww01



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USGS Water Resources

Data Category:

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▼


Geographic Area:

United States

▼

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Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 323436103302801

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

USGS 323436103302801 20S.34E.12.44333

Available data for this site

Groundwater: Field measurements

▼

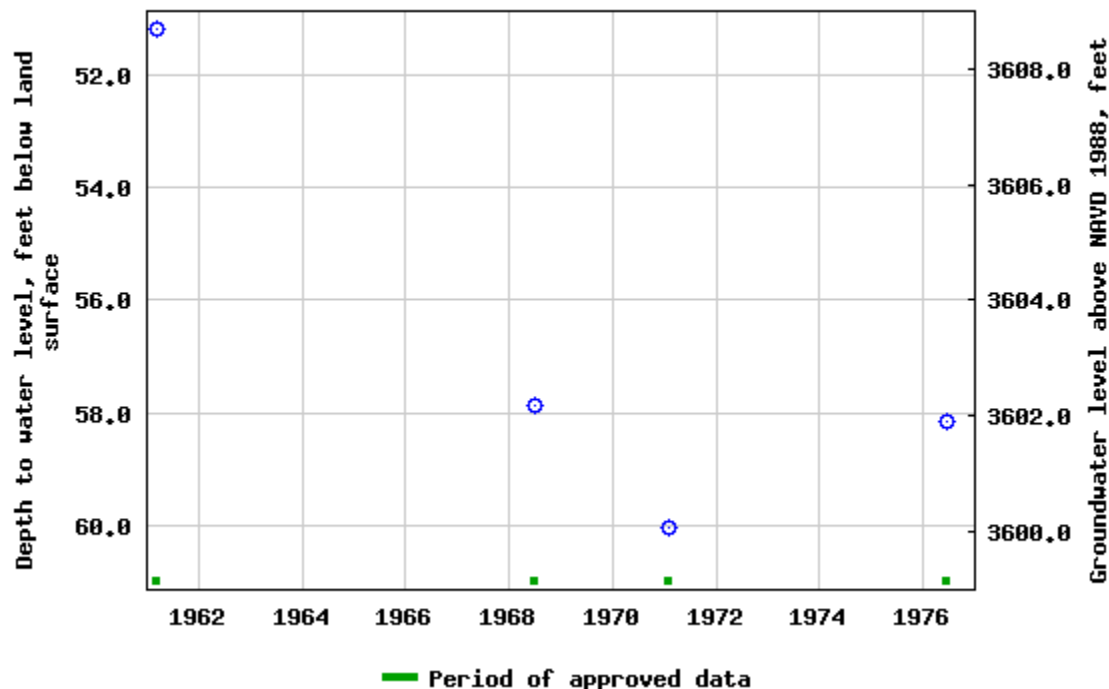
GO

Lea County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°34'36", Longitude 103°30'28" NAD27
Land-surface elevation 3,660 feet above NAVD88
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

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

USGS 323436103302801 20S,34E,12,44333



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Title: Groundwater for USA: Water Levels

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



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4.11 0.61 nadww01



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Agency code = usgs
site_no list =

- 323436103302802

Minimum number of levels = 1
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USGS 323436103302802 20S.34E.12.443

Available data for this site

Groundwater: Field measurements ▼

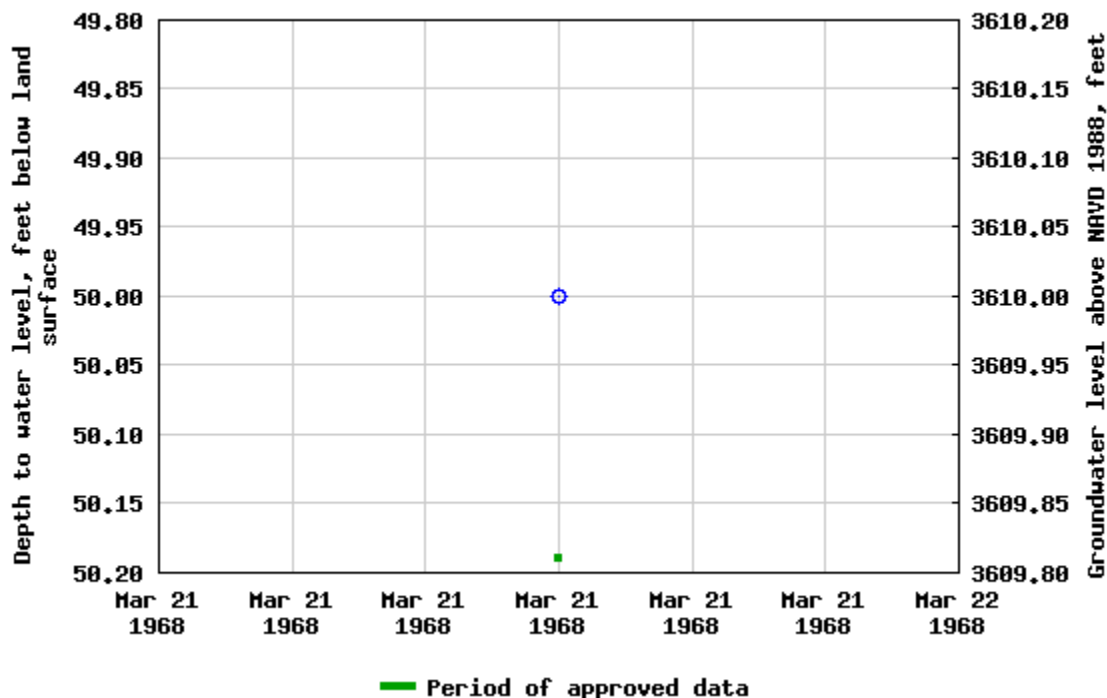
GO

Lea County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°34'36", Longitude 103°30'28" NAD27
Land-surface elevation 3,660 feet above NAVD88

Output formats

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

USGS 323436103302802 20S.34E.12.443



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Title: Groundwater for USA: Water Levels

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



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3.58 0.63 nadww01



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USGS Water Resources

Data Category:


Groundwater

Geographic Area:

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Agency code = usgs

site_no list =

- 323440103291401

Minimum number of levels = 1

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USGS 323440103291401 20S.35E.07.44420

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°34'40", Longitude 103°29'14" NAD27

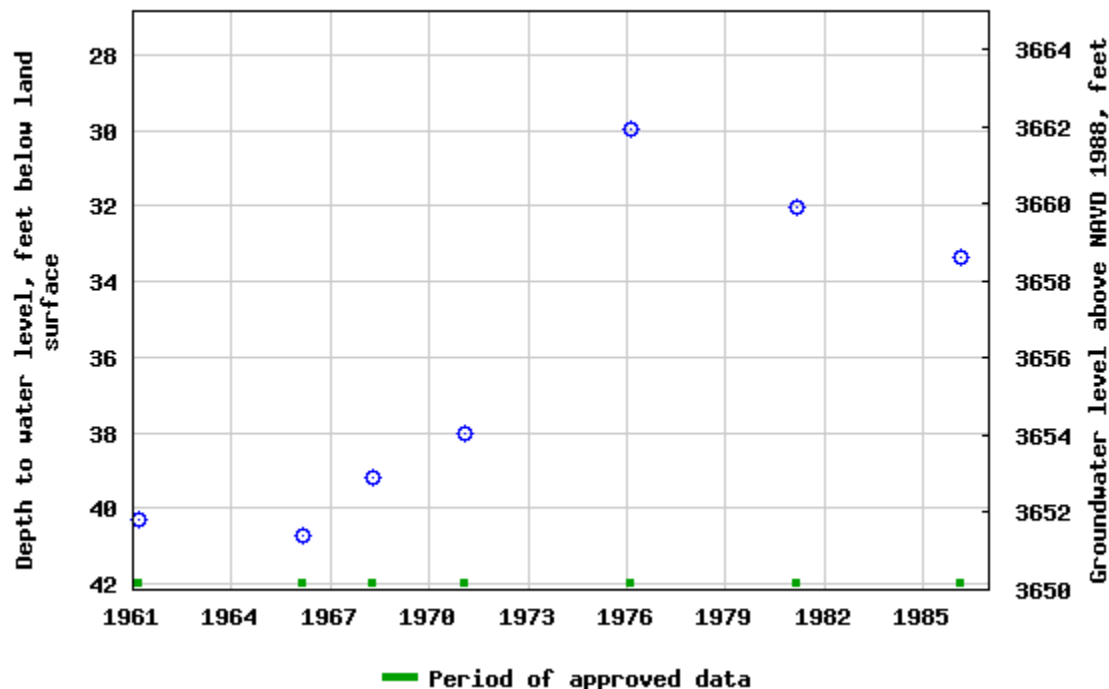
Land-surface elevation 3,692 feet above NAVD88

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

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

USGS 323440103291401 28S,35E,07,44420



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

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Title: Groundwater for USA: Water Levels

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



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

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2.5 0.62 nadww01

Appendix B

Field Data and Soil Profile Logs



Initial Release Assessment Form

Project: Lea South Tank Battery

Project Number: 13592

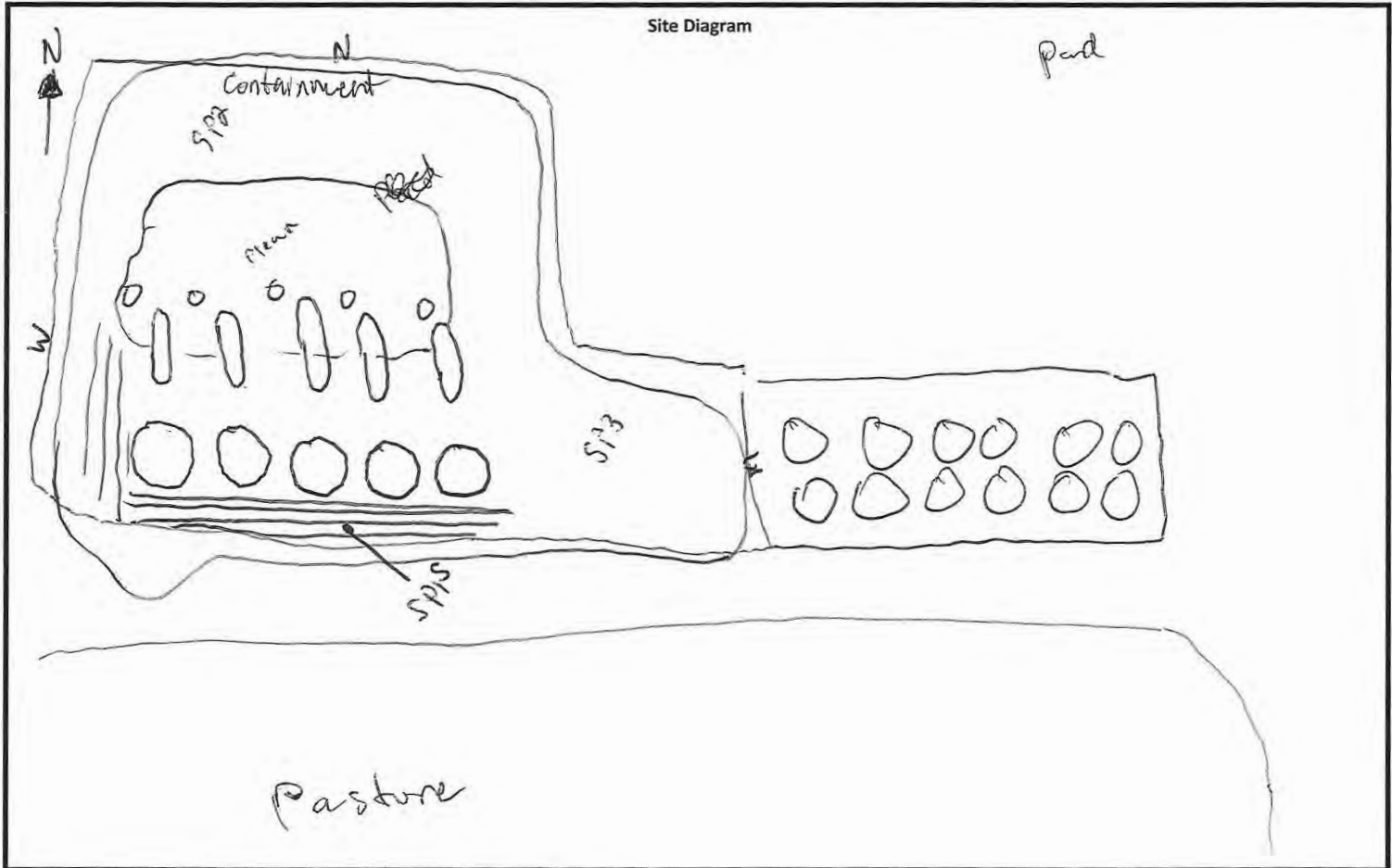
Clean Up Level:

Latitude: 32.560443

Date: 1.7.21

20,000 mg/kg Cl-, 2,500 mg/kg TPH

Longitude: -103.511642



Notes:

Notes section with multiple lines for handwritten text.

~Length:

~Width:

~Area:

~Depth:

3-4 Representative Pictures of the Affected Area including sample locations?

Necessary Samples Field Screened and on Ice?

Sample and Field Screen Data Entered on Sample Log?

Was horizontal and vertical delineation achieved?

Yes

No

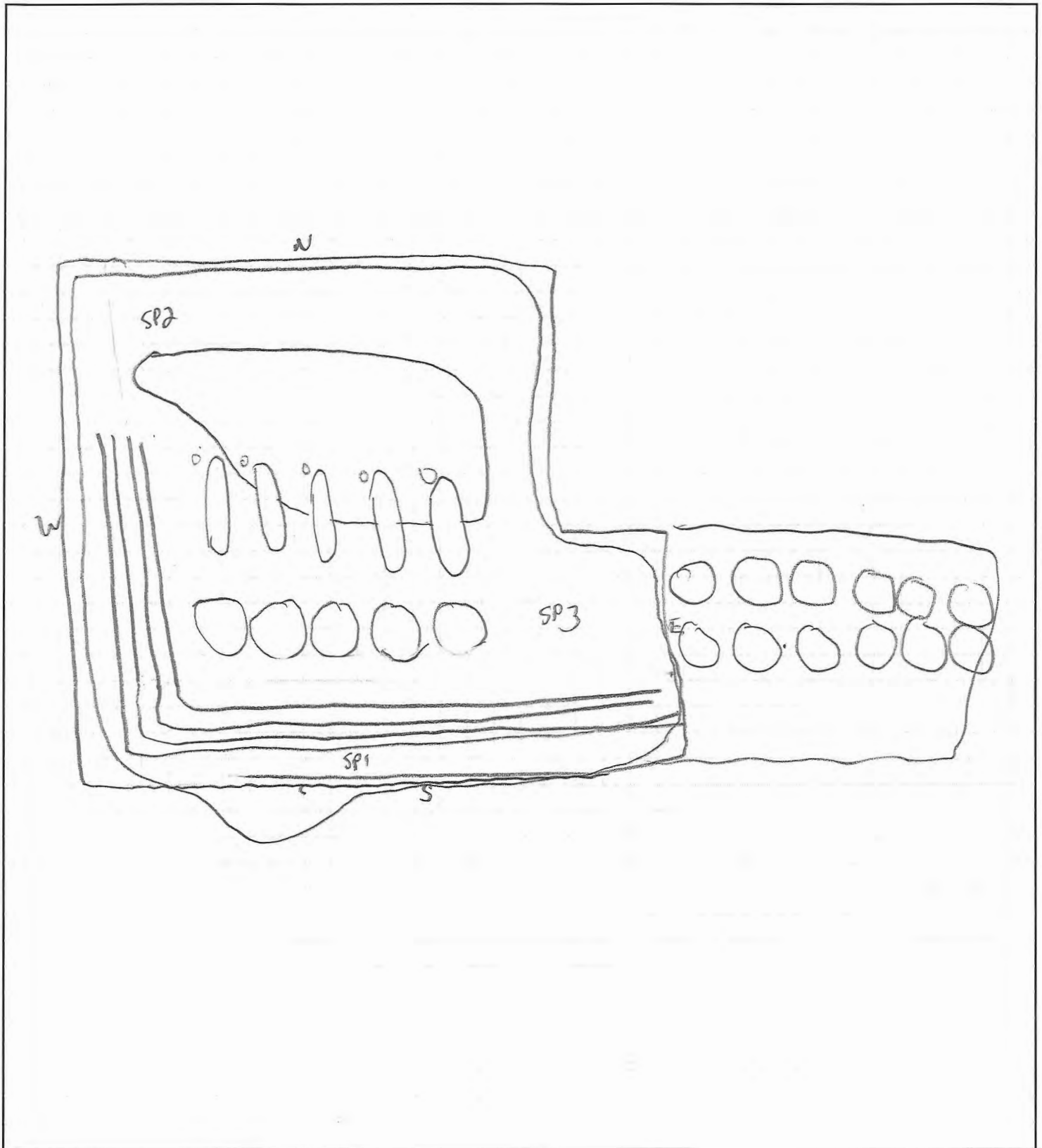




Field Map

Project: 13592

Date: 1.7.21





1.7.21

Longitude: -103.511642

GPS Sample Points, Center of Comp Areas



Soil Profile

Date:

1.7.21

Project: Lea South Tank Battery

Project Number: 13592

Latitude: 32.560443

Longitude: -103.511642

Depth (ft. bgs)

Description

1	refusal	Caliche
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Appendix C

Laboratory Analytical Reports

Certificate of Analysis Summary 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Lea South Tank Battery

Project Id: 13592
Contact: PM
Project Location: Rural Lea County, NM

Date Received in Lab: Fri 01.08.2021 12:02
Report Date: 01.18.2021 11:22
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	683896-001	683896-002	683896-003	683896-004	683896-005	683896-006
	<i>Field Id:</i>	SP1 @ Surface	SP1 @ 1'R	S2 @ Surface	SP2 @ 1'	SP3 @ Surface	SP3 @ 1'
	<i>Depth:</i>		1- ft		1- ft		1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	01.07.2021 00:00	01.07.2021 00:00	01.07.2021 00:00	01.07.2021 00:00	01.07.2021 00:00	01.07.2021 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	01.08.2021 16:00	01.08.2021 16:00	01.08.2021 16:00	01.08.2021 16:00	01.08.2021 16:00	01.08.2021 16:00
	<i>Analyzed:</i>	01.09.2021 23:17	01.09.2021 23:42	01.10.2021 00:08	01.10.2021 00:33	01.10.2021 00:58	01.10.2021 01:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		0.207 0.00198	0.00256 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Toluene		2.84 D 0.198	0.0193 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Ethylbenzene		0.293 0.00198	0.0132 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
m,p-Xylenes		0.407 0.00397	0.0143 0.00398	<0.00400 0.00400	<0.00399 0.00399	<0.00397 0.00397	<0.00396 0.00396
o-Xylene		0.288 0.00198	0.0180 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Total Xylenes		0.695 0.00198	0.0323 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Total BTEX		4.04 0.00198	0.0674 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00198 0.00198
Inorganic Anions by EPA 300	<i>Extracted:</i>	01.09.2021 12:45	01.09.2021 12:45	01.09.2021 12:45	01.09.2021 12:45	01.09.2021 12:45	01.09.2021 12:45
	<i>Analyzed:</i>	01.09.2021 21:15	01.09.2021 21:20	01.09.2021 21:25	01.09.2021 21:31	01.09.2021 21:36	01.09.2021 21:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		9890 50.0	12000 100	19400 249	428 4.95	3480 25.0	199 5.04
TPH by SW8015 Mod	<i>Extracted:</i>	01.09.2021 09:00	01.09.2021 09:00	01.09.2021 09:00	01.09.2021 09:00	01.09.2021 09:00	01.09.2021 09:00
	<i>Analyzed:</i>	01.09.2021 17:28	01.09.2021 17:47	01.09.2021 18:06	01.10.2021 08:08	01.10.2021 08:27	01.10.2021 08:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		327 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		6400 49.8	749 50.0	<49.9 49.9	84.0 49.9	945 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		258 49.8	130 50.0	<49.9 49.9	<49.9 49.9	175 50.0	<49.9 49.9
Total TPH		6990 49.8	879 50.0	<49.9 49.9	84.0 49.9	1120 50.0	<49.9 49.9

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Certificate of Analysis Summary 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Lea South Tank Battery

Project Id: 13592
Contact: PM
Project Location: Rural Lea County, NM

Date Received in Lab: Fri 01.08.2021 12:02
Report Date: 01.18.2021 11:22
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	683896-007	683896-008	683896-009	683896-010		
	<i>Field Id:</i>	NH	EH	WH	SH		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	01.07.2021 00:00	01.07.2021 00:00	01.07.2021 00:00	01.07.2021 00:00		
BTEX by EPA 8021B	<i>Extracted:</i>	01.08.2021 16:00	01.08.2021 16:00	01.08.2021 16:00	01.08.2021 16:00		
	<i>Analyzed:</i>	01.10.2021 01:48	01.10.2021 02:13	01.10.2021 02:39	01.10.2021 03:05		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198		
Toluene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198		
Ethylbenzene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198		
m,p-Xylenes		<0.00396 0.00396	<0.00398 0.00398	<0.00399 0.00399	<0.00397 0.00397		
o-Xylene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198		
Total Xylenes		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198		
Total BTEX		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198		
Inorganic Anions by EPA 300	<i>Extracted:</i>	01.09.2021 12:45	01.09.2021 13:00	01.09.2021 13:00	01.09.2021 13:00		
	<i>Analyzed:</i>	01.09.2021 21:46	01.09.2021 16:18	01.09.2021 16:34	01.09.2021 16:39		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		30.3 5.00	36.6 4.95	8.54 4.99	24.2 4.96		
TPH by SW8015 Mod	<i>Extracted:</i>	01.09.2021 09:00	01.09.2021 09:00	01.09.2021 09:00	01.09.2021 09:00		
	<i>Analyzed:</i>	01.10.2021 09:04	01.10.2021 09:23	01.10.2021 09:42	01.10.2021 10:01		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9		
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9		
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9		
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9		

BRL - Below Reporting Limit

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Analytical Report 683896

for

Etech Environmental & Safety Solution, Inc

Project Manager: PM

Lea South Tank Battery

13592

01.18.2021

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.18.2021

Project Manager: **PM**

Etech Environmental & Safety Solution, Inc

P.O. Box 62228

Midland, TX 79711

Reference: Eurofins Xenco, LLC Report No(s): **683896**

Lea South Tank Battery

Project Address: Rural Lea County, NM

PM :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 683896. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 683896 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 683896****Etech Environmental & Safety Solution, Inc, Midland, TX**

Lea South Tank Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP1 @ Surface	S	01.07.2021 00:00		683896-001
SP1 @ 1'R	S	01.07.2021 00:00	1 ft	683896-002
S2 @ Surface	S	01.07.2021 00:00		683896-003
SP2 @ 1'	S	01.07.2021 00:00	1 ft	683896-004
SP3 @ Surface	S	01.07.2021 00:00		683896-005
SP3 @ 1'	S	01.07.2021 00:00	1 ft	683896-006
NH	S	01.07.2021 00:00		683896-007
EH	S	01.07.2021 00:00		683896-008
WH	S	01.07.2021 00:00		683896-009
SH	S	01.07.2021 00:00		683896-010

**CASE NARRATIVE****Client Name: Etech Environmental & Safety Solution, Inc****Project Name: Lea South Tank Battery**Project ID: 13592
Work Order Number(s): 683896Report Date: 01.18.2021
Date Received: 01.08.2021**Sample receipt non conformances and comments:****Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3147309 BTEX by EPA 8021B

Surrogate 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected.

Samples affected are: 683896-002,683896-003.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 683896-005,683896-003,683896-001.

Batch: LBA-3147383 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 683896-008,683896-006.



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SP1 @ Surface**

Matrix: Soil

Date Received: 01.08.2021 12:02

Lab Sample Id: 683896-001

Date Collected: 01.07.2021 00:00

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.09.2021 12:45

% Moisture:

Seq Number: 3147340

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9890	50.0	mg/kg	01.09.2021 21:15		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MNR

Analyst: ARM

Date Prep: 01.09.2021 09:00

% Moisture:

Seq Number: 3147383

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	327	49.8	mg/kg	01.09.2021 17:28		1
Diesel Range Organics (DRO)	C10C28DRO	6400	49.8	mg/kg	01.09.2021 17:28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	258	49.8	mg/kg	01.09.2021 17:28		1
Total TPH	PHC635	6990	49.8	mg/kg	01.09.2021 17:28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-130	01.09.2021 17:28	
o-Terphenyl	84-15-1	109	%	70-130	01.09.2021 17:28	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SP1 @ Surface**

Matrix: Soil

Date Received: 01.08.2021 12:02

Lab Sample Id: 683896-001

Date Collected: 01.07.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3147309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.207	0.00198	mg/kg	01.09.2021 23:17		1
Toluene	108-88-3	2.84	0.198	mg/kg	01.11.2021 23:47	D	100
Ethylbenzene	100-41-4	0.293	0.00198	mg/kg	01.09.2021 23:17		1
m,p-Xylenes	179601-23-1	0.407	0.00397	mg/kg	01.09.2021 23:17		1
o-Xylene	95-47-6	0.288	0.00198	mg/kg	01.09.2021 23:17		1
Total Xylenes	1330-20-7	0.695	0.00198	mg/kg	01.09.2021 23:17		1
Total BTEX		4.04	0.00198	mg/kg	01.11.2021 23:47		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	85	%	70-130	01.09.2021 23:17		
4-Bromofluorobenzene	460-00-4	306	%	70-130	01.09.2021 23:17	**	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SP1 @ 1'R**

Matrix: Soil

Date Received: 01.08.2021 12:02

Lab Sample Id: 683896-002

Date Collected: 01.07.2021 00:00

Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.09.2021 12:45

% Moisture:

Seq Number: 3147340

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12000	100	mg/kg	01.09.2021 21:20		20

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MNR

Analyst: ARM

Date Prep: 01.09.2021 09:00

% Moisture:

Seq Number: 3147383

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.09.2021 17:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	749	50.0	mg/kg	01.09.2021 17:47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	130	50.0	mg/kg	01.09.2021 17:47		1
Total TPH	PHC635	879	50.0	mg/kg	01.09.2021 17:47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-130	01.09.2021 17:47	
o-Terphenyl	84-15-1	104	%	70-130	01.09.2021 17:47	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX Lea South Tank Battery

Sample Id: **SP1 @ 1'R**

Matrix: Soil

Date Received: 01.08.2021 12:02

Lab Sample Id: 683896-002

Date Collected: 01.07.2021 00:00

Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:

Seq Number: 3147309

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00256	0.00199	mg/kg	01.09.2021 23:42		1
Toluene	108-88-3	0.0193	0.00199	mg/kg	01.09.2021 23:42		1
Ethylbenzene	100-41-4	0.0132	0.00199	mg/kg	01.09.2021 23:42		1
m,p-Xylenes	179601-23-1	0.0143	0.00398	mg/kg	01.09.2021 23:42		1
o-Xylene	95-47-6	0.0180	0.00199	mg/kg	01.09.2021 23:42		1
Total Xylenes	1330-20-7	0.0323	0.00199	mg/kg	01.09.2021 23:42		1
Total BTEX		0.0674	0.00199	mg/kg	01.09.2021 23:42		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	31	%	70-130	01.09.2021 23:42	**	
4-Bromofluorobenzene	460-00-4	87	%	70-130	01.09.2021 23:42		



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **S2 @ Surface**

Matrix: Soil

Date Received: 01.08.2021 12:02

Lab Sample Id: 683896-003

Date Collected: 01.07.2021 00:00

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.09.2021 12:45

% Moisture:

Seq Number: 3147340

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19400	249	mg/kg	01.09.2021 21:25		50

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MNR

Analyst: ARM

Date Prep: 01.09.2021 09:00

% Moisture:

Seq Number: 3147383

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.09.2021 18:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.09.2021 18:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.09.2021 18:06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.09.2021 18:06	U	1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number

% Recovery

Units

Limits

Analysis Date

Flag

111-85-3

79

%

70-130

01.09.2021 18:06

84-15-1

92

%

70-130

01.09.2021 18:06



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **S2 @ Surface**

Matrix: Soil

Date Received: 01.08.2021 12:02

Lab Sample Id: 683896-003

Date Collected: 01.07.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:

Seq Number: 3147309

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.2021 00:08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.2021 00:08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.2021 00:08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.10.2021 00:08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.2021 00:08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.2021 00:08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.2021 00:08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	158	%	70-130	01.10.2021 00:08	**	
1,4-Difluorobenzene	540-36-3	69	%	70-130	01.10.2021 00:08	**	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SP2 @ 1'**
Lab Sample Id: 683896-004

Matrix: Soil
Date Collected: 01.07.2021 00:00

Date Received: 01.08.2021 12:02
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.09.2021 12:45

% Moisture:
Basis: Wet Weight

Seq Number: 3147340

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	428	4.95	mg/kg	01.09.2021 21:31		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MNR

Analyst: ARM

Date Prep: 01.09.2021 09:00

% Moisture:
Basis: Wet Weight

Seq Number: 3147383

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.10.2021 08:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	84.0	49.9	mg/kg	01.10.2021 08:08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.10.2021 08:08	U	1
Total TPH	PHC635	84.0	49.9	mg/kg	01.10.2021 08:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	01.10.2021 08:08	
o-Terphenyl	84-15-1	83	%	70-130	01.10.2021 08:08	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SP2 @ 1'**
 Lab Sample Id: 683896-004

Matrix: Soil
 Date Collected: 01.07.2021 00:00

Date Received: 01.08.2021 12:02
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:
 Basis: Wet Weight

Seq Number: 3147309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.2021 00:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.2021 00:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.2021 00:33	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.10.2021 00:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.2021 00:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.2021 00:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.2021 00:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.10.2021 00:33	
4-Bromofluorobenzene	460-00-4	126	%	70-130	01.10.2021 00:33	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SP3 @ Surface**

Matrix: Soil

Date Received: 01.08.2021 12:02

Lab Sample Id: 683896-005

Date Collected: 01.07.2021 00:00

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.09.2021 12:45

% Moisture:

Seq Number: 3147340

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3480	25.0	mg/kg	01.09.2021 21:36		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MNR

Analyst: ARM

Date Prep: 01.09.2021 09:00

% Moisture:

Seq Number: 3147383

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.10.2021 08:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	945	50.0	mg/kg	01.10.2021 08:27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	175	50.0	mg/kg	01.10.2021 08:27		1
Total TPH	PHC635	1120	50.0	mg/kg	01.10.2021 08:27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-130	01.10.2021 08:27	
o-Terphenyl	84-15-1	101	%	70-130	01.10.2021 08:27	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SP3 @ Surface**

Matrix: Soil

Date Received: 01.08.2021 12:02

Lab Sample Id: 683896-005

Date Collected: 01.07.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:

Seq Number: 3147309

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.10.2021 00:58	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.10.2021 00:58	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.10.2021 00:58	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.10.2021 00:58	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.10.2021 00:58	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.10.2021 00:58	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.10.2021 00:58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	01.10.2021 00:58		
4-Bromofluorobenzene	460-00-4	155	%	70-130	01.10.2021 00:58	**	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SP3 @ 1'**
Lab Sample Id: 683896-006

Matrix: Soil
Date Collected: 01.07.2021 00:00

Date Received: 01.08.2021 12:02
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 01.09.2021 12:45

% Moisture:
Basis: Wet Weight

Seq Number: 3147340

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	199	5.04	mg/kg	01.09.2021 21:41		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: MNR

Analyst: ARM

Date Prep: 01.09.2021 09:00

% Moisture:
Basis: Wet Weight

Seq Number: 3147383

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.10.2021 08:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.10.2021 08:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.10.2021 08:46	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.10.2021 08:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	67	%	70-130	01.10.2021 08:46	**
o-Terphenyl	84-15-1	78	%	70-130	01.10.2021 08:46	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SP3 @ 1'**
Lab Sample Id: 683896-006

Matrix: Soil
Date Collected: 01.07.2021 00:00

Date Received: 01.08.2021 12:02
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3147309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.10.2021 01:23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.10.2021 01:23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.10.2021 01:23	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.10.2021 01:23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.10.2021 01:23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.10.2021 01:23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.10.2021 01:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.10.2021 01:23	
4-Bromofluorobenzene	460-00-4	121	%	70-130	01.10.2021 01:23	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **NH** Matrix: Soil Date Received: 01.08.2021 12:02
 Lab Sample Id: 683896-007 Date Collected: 01.07.2021 00:00
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 01.09.2021 12:45 % Moisture:
 Seq Number: 3147340 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	30.3	5.00	mg/kg	01.09.2021 21:46		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MNR
 Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:
 Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.10.2021 09:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.10.2021 09:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.10.2021 09:04	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.10.2021 09:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	76	%	70-130	01.10.2021 09:04		
o-Terphenyl	84-15-1	85	%	70-130	01.10.2021 09:04		



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX Lea South Tank Battery

Sample Id: **NH**
Lab Sample Id: 683896-007

Matrix: Soil
Date Collected: 01.07.2021 00:00

Date Received: 01.08.2021 12:02

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3147309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.10.2021 01:48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.10.2021 01:48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.10.2021 01:48	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.10.2021 01:48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.10.2021 01:48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.10.2021 01:48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.10.2021 01:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	126	%	70-130	01.10.2021 01:48		
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.10.2021 01:48		



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **EH** Matrix: Soil Date Received: 01.08.2021 12:02
 Lab Sample Id: 683896-008 Date Collected: 01.07.2021 00:00
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 01.09.2021 13:00 % Moisture:
 Seq Number: 3147341 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.6	4.95	mg/kg	01.09.2021 16:18		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MNR
 Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:
 Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.10.2021 09:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.10.2021 09:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.10.2021 09:23	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.10.2021 09:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	66	%	70-130	01.10.2021 09:23	**
o-Terphenyl	84-15-1	74	%	70-130	01.10.2021 09:23	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **EH**
 Lab Sample Id: 683896-008

Matrix: Soil
 Date Collected: 01.07.2021 00:00

Date Received: 01.08.2021 12:02

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:
 Basis: Wet Weight

Seq Number: 3147309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.10.2021 02:13	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.10.2021 02:13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.10.2021 02:13	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.10.2021 02:13	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.10.2021 02:13	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.10.2021 02:13	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.10.2021 02:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.10.2021 02:13	
4-Bromofluorobenzene	460-00-4	127	%	70-130	01.10.2021 02:13	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **WH** Matrix: Soil Date Received: 01.08.2021 12:02
 Lab Sample Id: 683896-009 Date Collected: 01.07.2021 00:00
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 01.09.2021 13:00 % Moisture:
 Seq Number: 3147341 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.54	4.99	mg/kg	01.09.2021 16:34		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MNR
 Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:
 Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.10.2021 09:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.10.2021 09:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.10.2021 09:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.10.2021 09:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-130	01.10.2021 09:42	
o-Terphenyl	84-15-1	90	%	70-130	01.10.2021 09:42	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **WH**
Lab Sample Id: 683896-009

Matrix: Soil
Date Collected: 01.07.2021 00:00

Date Received: 01.08.2021 12:02

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3147309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.2021 02:39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.2021 02:39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.2021 02:39	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.10.2021 02:39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.2021 02:39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.10.2021 02:39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.2021 02:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.10.2021 02:39	
4-Bromofluorobenzene	460-00-4	122	%	70-130	01.10.2021 02:39	



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX Lea South Tank Battery

Sample Id: **SH** Matrix: Soil Date Received: 01.08.2021 12:02
 Lab Sample Id: 683896-010 Date Collected: 01.07.2021 00:00
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE
 Analyst: CHE Date Prep: 01.09.2021 13:00 % Moisture:
 Seq Number: 3147341 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24.2	4.96	mg/kg	01.09.2021 16:39		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: MNR
 Analyst: ARM Date Prep: 01.09.2021 09:00 % Moisture:
 Seq Number: 3147383 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.10.2021 10:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.10.2021 10:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.10.2021 10:01	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.10.2021 10:01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	70	%	70-130	01.10.2021 10:01		
o-Terphenyl	84-15-1	79	%	70-130	01.10.2021 10:01		



Certificate of Analytical Results 683896

Etech Environmental & Safety Solution, Inc, Midland, TX

Lea South Tank Battery

Sample Id: **SH**
Lab Sample Id: 683896-010

Matrix: Soil
Date Collected: 01.07.2021 00:00

Date Received: 01.08.2021 12:02

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 01.08.2021 16:00

% Moisture:
Basis: Wet Weight

Seq Number: 3147309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.10.2021 03:05	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.10.2021 03:05	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.10.2021 03:05	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.10.2021 03:05	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.10.2021 03:05	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.10.2021 03:05	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.10.2021 03:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.10.2021 03:05	
4-Bromofluorobenzene	460-00-4	126	%	70-130	01.10.2021 03:05	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Etech Environmental & Safety Solution, Inc

Lea South Tank Battery

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147340

Matrix: Solid

Prep Method: E300P

Date Prep: 01.09.2021

MB Sample Id: 7718823-1-BLK

LCS Sample Id: 7718823-1-BKS

LCSD Sample Id: 7718823-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	244	98	243	97	90-110	0	20	mg/kg	01.09.2021 19:15	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147341

Matrix: Solid

Prep Method: E300P

Date Prep: 01.09.2021

MB Sample Id: 7718819-1-BLK

LCS Sample Id: 7718819-1-BKS

LCSD Sample Id: 7718819-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	233	93	226	90	90-110	3	20	mg/kg	01.09.2021 16:08	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147340

Matrix: Soil

Prep Method: E300P

Date Prep: 01.09.2021

Parent Sample Id: 683895-010

MS Sample Id: 683895-010 S

MSD Sample Id: 683895-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.6	249	299	101	299	101	90-110	0	20	mg/kg	01.09.2021 20:44	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147340

Matrix: Soil

Prep Method: E300P

Date Prep: 01.09.2021

Parent Sample Id: 683982-070

MS Sample Id: 683982-070 S

MSD Sample Id: 683982-070 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	56.7	250	312	102	311	102	90-110	0	20	mg/kg	01.09.2021 19:30	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147341

Matrix: Soil

Prep Method: E300P

Date Prep: 01.09.2021

Parent Sample Id: 683896-008

MS Sample Id: 683896-008 S

MSD Sample Id: 683896-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.6	248	274	96	276	97	90-110	1	20	mg/kg	01.09.2021 16:23	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3147341

Matrix: Soil

Prep Method: E300P

Date Prep: 01.09.2021

Parent Sample Id: 684003-004

MS Sample Id: 684003-004 S

MSD Sample Id: 684003-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1320	1260	2550	98	2610	102	90-110	2	20	mg/kg	01.09.2021 17:36	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Etech Environmental & Safety Solution, Inc

Lea South Tank Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3147383

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.09.2021

MB Sample Id: 7718858-1-BLK

LCS Sample Id: 7718858-1-BKS

LCSD Sample Id: 7718858-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	946	95	887	89	70-130	6	20	mg/kg	01.09.2021 12:43	
Diesel Range Organics (DRO)	<50.0	1000	874	87	938	94	70-130	7	20	mg/kg	01.09.2021 12:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	73		84		86		70-130	%	01.09.2021 12:43
o-Terphenyl	86		83		87		70-130	%	01.09.2021 12:43

Analytical Method: TPH by SW8015 Mod

Seq Number: 3147383

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.09.2021

MB Sample Id: 7718858-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.09.2021 12:24	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3147383

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.09.2021

Parent Sample Id: 683898-001

MS Sample Id: 683898-001 S

MSD Sample Id: 683898-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	21.2	998	817	80	856	84	70-130	5	20	mg/kg	01.09.2021 13:39	
Diesel Range Organics (DRO)	21.4	998	804	78	804	78	70-130	0	20	mg/kg	01.09.2021 13:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		82		70-130	%	01.09.2021 13:39
o-Terphenyl	77		79		70-130	%	01.09.2021 13:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3147309

Matrix: Solid

Prep Method: SW5035A

Date Prep: 01.08.2021

MB Sample Id: 7718830-1-BLK

LCS Sample Id: 7718830-1-BKS

LCSD Sample Id: 7718830-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0764	76	0.0832	83	70-130	9	35	mg/kg	01.09.2021 14:36	
Toluene	<0.00200	0.100	0.0778	78	0.0872	87	70-130	11	35	mg/kg	01.09.2021 14:36	
Ethylbenzene	<0.00200	0.100	0.0740	74	0.0828	83	70-130	11	35	mg/kg	01.09.2021 14:36	
m,p-Xylenes	<0.00400	0.200	0.146	73	0.164	82	70-130	12	35	mg/kg	01.09.2021 14:36	
o-Xylene	<0.00200	0.100	0.0769	77	0.0890	89	70-130	15	35	mg/kg	01.09.2021 14:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	81		79		88		70-130	%	01.09.2021 14:36
4-Bromofluorobenzene	124		96		113		70-130	%	01.09.2021 14:36

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Etech Environmental & Safety Solution, Inc
Lea South Tank Battery

Analytical Method: BTEX by EPA 8021B

Seq Number: 3147309

Parent Sample Id: 683895-006

Matrix: Soil

MS Sample Id: 683895-006 S

Prep Method: SW5035A

Date Prep: 01.08.2021

MSD Sample Id: 683895-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0473	47	0.0752	76	70-130	46	35	mg/kg	01.09.2021 15:28	XF
Toluene	<0.00201	0.101	0.0535	53	0.0806	81	70-130	40	35	mg/kg	01.09.2021 15:28	XF
Ethylbenzene	<0.00201	0.101	0.0516	51	0.0767	77	70-130	39	35	mg/kg	01.09.2021 15:28	XF
m,p-Xylenes	<0.00402	0.201	0.103	51	0.152	76	70-130	38	35	mg/kg	01.09.2021 15:28	XF
o-Xylene	<0.00201	0.101	0.0581	58	0.0807	81	70-130	33	35	mg/kg	01.09.2021 15:28	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		95		70-130	%	01.09.2021 15:28
4-Bromofluorobenzene	125		125		70-130	%	01.09.2021 15:28

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Received: 10/14/19 Rev.: 2019

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental & Safety Solution, I**Date/ Time Received:** 01.08.2021 12.02.00 PM**Work Order #:** 683896**Acceptable Temperature Range:** 0 - 6 degC**Air and Metal samples Acceptable Range:** Ambient**Temperature Measuring device used :** IR8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01.08.2021

Checklist reviewed by:

Jessica Kramer

Date: 01.11.2021

Appendix D

Photographic Log

Photographic Log



Photo Number: 1	 <p>Dec 18, 2020 at 1:56:11 PM Hobbs NM 88240 United States</p> <p>32.559925, -103.512095</p>
Photo Direction: East	
Photo Description: North side of release area.	

Photo Number: 2	 <p>Dec 18, 2020 at 1:56:30 PM Hobbs NM 88240 United States</p> <p>32.559917, -103.511954</p>
Photo Direction: East-Southeast	
Photo Description: Northeast corner of release area.	

Photographic Log

Photo Number: 3	 <p>Dec 18, 2020 at 1:54:38 PM Hobbs NM 88240 United States</p> <p>32.559854, -103.511802</p>
Photo Direction: West	
Photo Description: North side of release area.	

Photo Number: 4	 <p>Dec 18, 2020 at 1:54:43 PM Hobbs NM 88240 United States</p> <p>32.559915, -103.511769</p>
Photo Direction: South-Southwest	
Photo Description: East side of release area.	

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2035647738
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

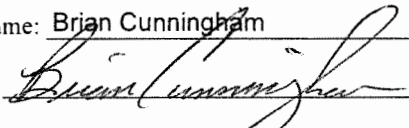
Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

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

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

Printed Name: Brian Cunningham

Title: Production Foreman

Signature: 

Date: 1/21/21


email: bcunningham@legacylp.com

Telephone: 432-234-9450

OCD Only

Received by: Robert Hamlet Date: 5/4/2021

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: 

Date: 5/4/2021

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 15234

CONDITIONS OF APPROVAL

Operator:		OGRID:	Action Number:	Action Type:
LEGACY RESERVES OPERATING, LP	15 Smith Road	240974	15234	C-141
Suite 3000	Midland, TX79705			

OCD Reviewer	Condition
rhamlet	The Remediation Plan is approved with the following conditions: All edge/sidewall must be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH. All floor samples must meet closure criteria standards for DTG. Variance is approved for 50 linear feet on sidewalls and 500 ft2 on floor samples. Please make sure all remediation is accomplished before asking for a deferral, all sample points must be specified in closure report. Remove as much contaminated soil with shovel/hydrovac as possible.