District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NRM2004550944
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Vanguard Operating	OGRID 258350
Contact Name Carmen E Pitt	Contact Telephone 432-248-8145
Contact email cpitt@grizzlyenergyllc.com	Incident # *(assigned by OCD)*
Contact mailing address 4001 Penbrook Suite 201, Odessa, TX, 79762	

Location of Release Source

Latitude 32.78616 Longitude -104.19063
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Kersey State TB	Site Type Tank Battery
Date Release Discovered 2/8/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
P	32	17S	28E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☑ Private (*Name:* COG Operating, LLC)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☑ Crude Oil	Volume Released (bbls) 1.9	Volume Recovered (bbls) 1
☑ Produced Water	Volume Released (bbls) 15.2	Volume Recovered (bbls) 7.5
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☑ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release The release was attributed to the transfer pump not having power, resulting in a tank being over filled. The release was confined to within the secondary containment.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2004550944
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☑ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

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

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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: Carmen E Pitt Title: Senior HSE Specialist

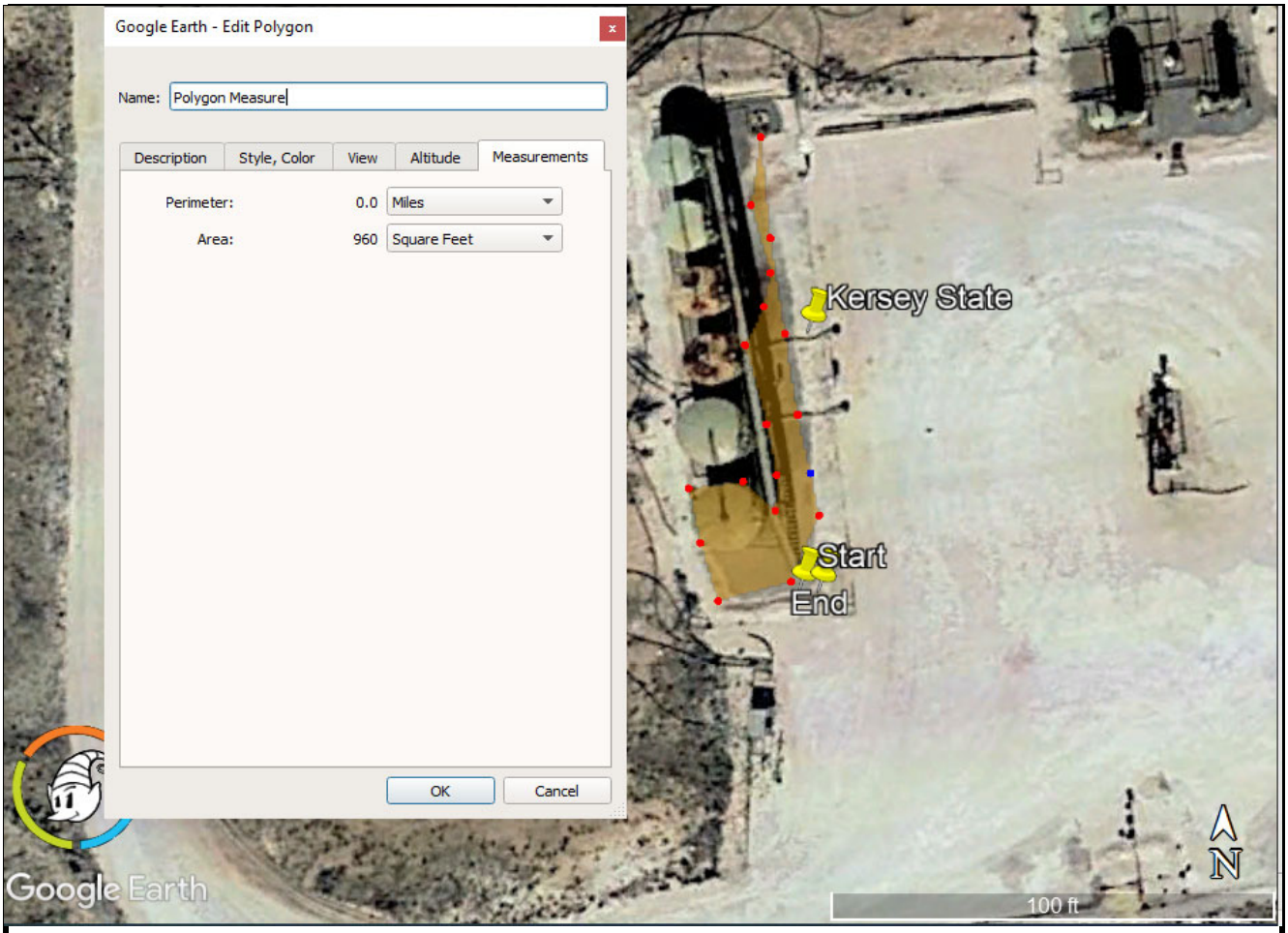
Signature: Carmen E Pitt Date: 2/14/2020

email: cpitt@grizzlyenergyllc.com Telephone: 432-248-8145

OCD Only

Received by: Ramona Marcus Date: 02/14/2020

NRM2004550944



Volume Calculation — Kersey State Tank Battery

ID	Area (Ft^2)	Depth (Ft)	%Porosity/ Saturation	Volume (Ft^3)	Volume (bbls)
Area #1	960	0.20	0.25	48.00	8.5

Volume of Liquid Remaining in Soil:	8.5	bbls
Volume Recovered:	8.5	bbls
Total Volume:	17.0	bbls
Oil (Approximate)	11.1	%
Volume of Oil Released:	1.9	bbls
Volume of Water Released:	15.2	bbls
Volume of Oil Recovered:	1.0	
Volume of Water Recovered:	7.5	

State of New Mexico
Oil Conservation Division

Incident ID	NRM2004550944
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?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ 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)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ 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?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☑ 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.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2004550944
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: Carmen E Pitt Title: Senior HSE Specialist

Signature: Carmen E Pitt Date: 5/12/2020

email: cpitt@grizzlyenergyllc.com Telephone: 432-248-8145

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2004550944
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: Carmen E Pitt Title: Senior HSE Specialist

Signature: Carmen E Pitt Date: 5/12/2020

email: cpitt@grizzlyenergyllc.com Telephone: 432-248-8145

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Site Assessment Report and Proposed Remediation Workplan & Deferral Request

Grizzly Energy, LLC
Kersey State Battery
Eddy County, New Mexico
Unit Letter P, Section 32, Township 17 South, Range 28 East
Latitude 32.78601 North, Longitude 104.19064 West
NMOCD Reference No. 2RP-NRM2004550944

Prepared By:

Etech Environmental & Safety Solutions, Inc.
3100 Plains Highway
Lovington, New Mexico 88260

Lance Crenshaw

Joel W. Lowry

TABLE OF CONTENTS

1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Grizzly Energy, LLC, has prepared this Report for the Release Site known as the Kersey State Battery. Details of the release are summarized below:

Location of Release Source

Latitude: 32.78601 Longitude: -104.19064

Provided GPS are in WGS84 format.

Site Name:	Kersey State Battery	Site Type:	Tank Battery
Date Release Discovered:	2/8/2020	API # (if applicable):	

Unit Letter	Section	Township	Range	County
P	32	17S	28E	Eddy

Surface Owner: [ ] State [ ] Federal [ ] Tribal [X] Private (Name COG Operating, LLC)

Nature and Volume of Release

[X] Crude Oil	Volume Released (bbls) 1.9	Volume Recovered (bbls) 1
[X] Produced Water	Volume Released (bbls) 15.2	Volume Recovered (bbls) 7.5
	Is the concentration of dissolved chloride in the produced water > 10,000 mg/L?	[X] Yes [ ] No [ ] N/A
[ ] Condensate	Volume Released (bbls)	Volume Recovered (bbls)
[ ] Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
[ ] Other (describe)	Volume/Weight Released	Volume/Weight Recovered

Cause of Release:
The release was attributed to the transfer pump not having power, resulting in a tank being over filled. The release was confined to within the secondary containment.

Initial Response

- [X] The source of the release has been stopped.
- [X] The impacted area has been secured to protect human health and the environment.
- [X] Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices
- [X] 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 Release Site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

What is the shallowest depth to groundwater beneath the area affected by the release?	~100'
Did the release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production or storage site?	☐ Yes ☒ 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.

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 for the Site is as follows:

Closure Criteria for Soil Impacted by a Release			
Probable Depth to Groundwater	**Constituent**	**Method**	**Limit**
~100'	Chloride	EPA 300.0 or SM4500 Cl B	10000 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	2500 mg/kg
	DRO + GRO	EPA SW-846 Method 8015M	1000 mg/kg
	BTEX	EPA SW-846 Methods 8021b or 8260b	50 mg/kg
	Benzene	EPA SW-846 Methods 8021b or 8260b	10 mg/kg

4.0 INITIAL SITE ASSESSMENT

On **February 25, 2020,** 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 (PID) and/or concentrations of chloride utilizing a Hach Quantab ® chloride test kit. A "Site & Sample Location Map" is provided as Figure 3. Field data and soil profile logs, if applicable, are provided as Appendix B.

Based on field observations and field test data, **fifteen (15)** delineation soil samples **(V1 @ Surf., V1 @ 3'-R, V2 @ Surf., V2 @ 2'-R, NHB @ Surf., NHB @ 1', EH1B @ Surf., EH1B @ 1', EH2BB @ Surf., EH2B @ 1', SHB @ Surf., SHB @ 1', WHB @ Surf., WHB @ 1',)** were submitted to the laboratory for analysis of BTEX, TPH and/or Chloride. Based on laboratory analytical results, soil was not affected above the NMOCD Closure Criteria beyond 2 Ft. bgs in the area characterized by sample point V2 and the horizontal extent of affected soil impacted above the NMOCD Closure Criteria was adequately defined. Further delineation would be required in the area characterized by sample point V1. A "Soil Chemistry Table" is provided as Table 1. Laboratory Analytical Reports are provided in Appendix C.

On March 20, 2020, Etech revisited the Site. During the site visit, a test trench (V1) was advanced in the area characterized by soil sample V1 @ 3'-R. During the advancement of the test trench, two (2) soil samples (V1 @ 3' and V1 @ 4') were collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated, TPH concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples.

5.0 PROPOSED REMEDIATION PLAN

Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment, Grizzly Energy, LLC proposes the following remediation activities designed to advance the Site toward an approved closure:

•Utilizing mechanical equipment, excavate impacted soil affected above the NMOCD Closure Criteria in the area characterized by sample point V1 to an estimated depth beyond 3 Ft. bgs and impacted soil in the area characterized by sample point V2 to an estimated depth of 2 Ft. bgs.
•The floor and 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 excavation confirmation soil samples, backfill the excavated area with locally sourced, non-impacted "like" material.
•Impacted soil affected above the NMOCD Closure Criteria remaining in-situ adjacent to the above ground storage tanks and associated equipment will be remediated upon abandoning and decommisioning the facility.
•Upon completion of remediation activities, a *Remediation Summary and Deferral Request* will be prepared detailing field activities and laboratory analytical results from confirmation soil samples.

6.0 SAMPLING PLAN

Upon completion of excavation activities, representative five-point composite excavation confirmation soil samples will be collected from the excavation sidewalls in each cardinal direction, representing no more than 50 linear ft. A minimum of **one (1)** representative five-point composite excavation confirmation soil sample will be collected from the base of the excavated area representing every **200 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 Plan. Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment it is estimated that approximately **110 cubic yards** 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, to the extent practicable. Excavated areas will be backfilled with locally sourced, non-impacted "like" material placed at or near original relative positions. The affected area will be contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable. The releas was limited to an active tank battery facility therefore reseeding will not be required. Final reclamation will be conducted in accordance with NMAC 19.15.29.13.

9.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this Site Assessment Report and Proposed Remediation Plan 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. Basis 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 Grizzly Energy, LLC. Use of the information contained in this report is prohibited without the consent of Etech and/or Grizzly Energy, LLC.

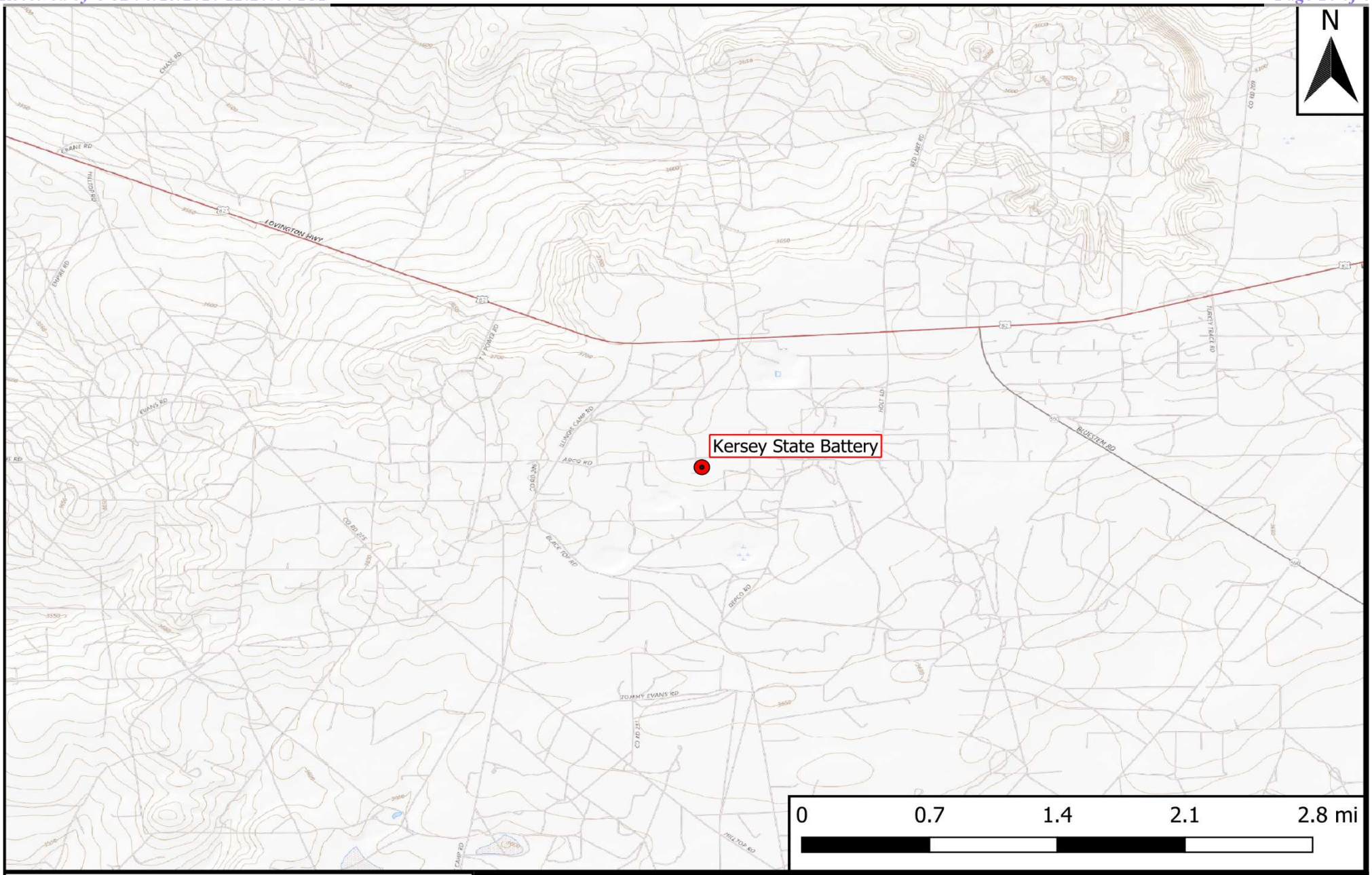
10.0 DISTRIBUTION

Grizzly Energy, LLC
4001 Penbrook
Suite 201
Odessa, TX 79762

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

(Electronic Submission)

Figure 1
Topographic Map



Legend

- Site Location

Figure 1
Topographic Map
Grizzly Energy, LLC
Kersey State Battery
GPS: 32.78605, -104.19039
Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: mag Checked: jwl Date: 2/12/20

Figure 2
Aerial Proximity Map

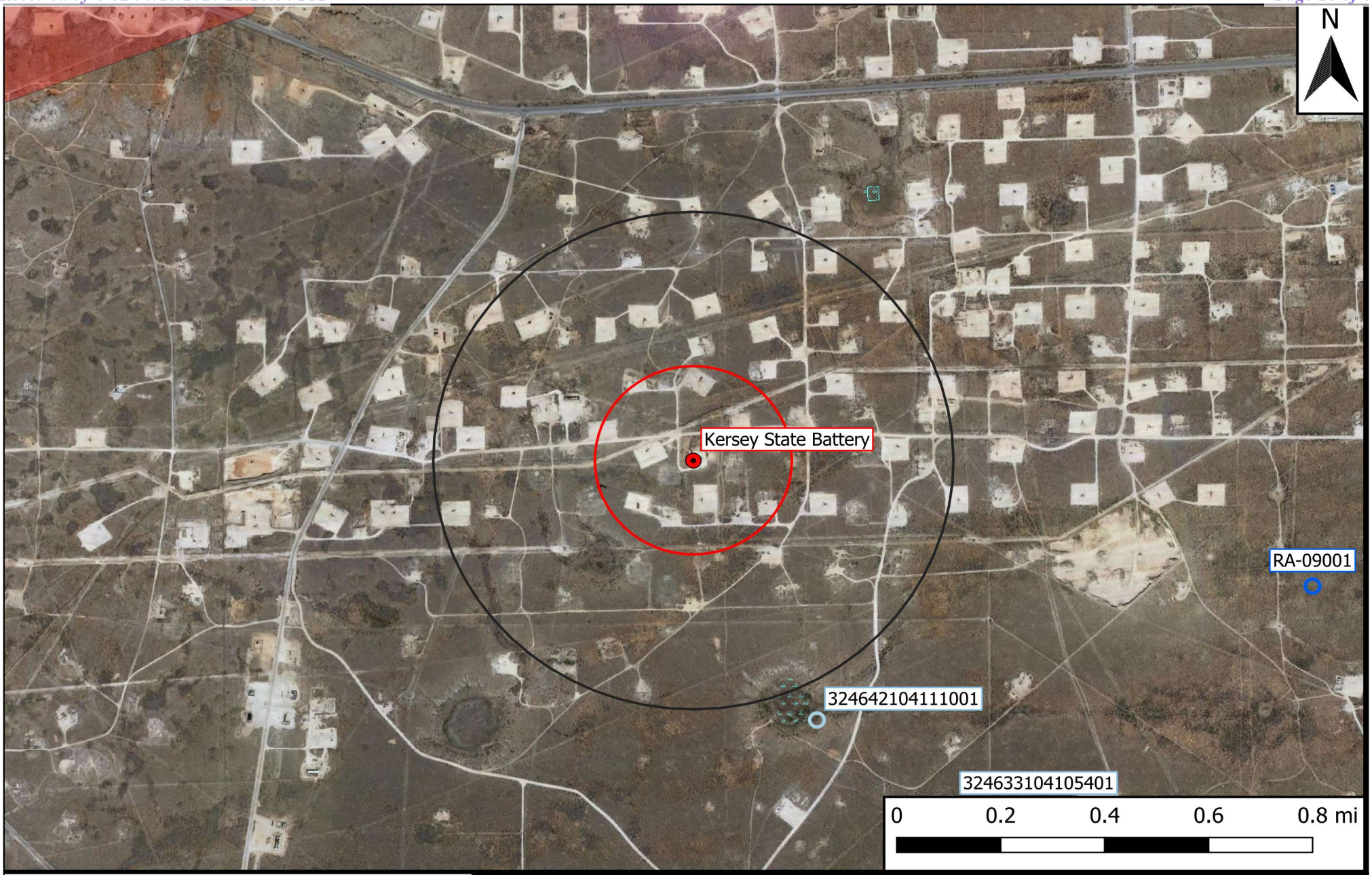


Figure 2
Aerial Map
Grizzly Energy, LLC
Kersey State Battery
GPS: 32.78605, -104.19039
Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: mag Checked: jwl Date: 2/12/20

Figure 3
Site and Sample Location Map

Legend:

- Sample Point
- Affected Area
- Buried Pipeline
- Test Trench
- Excavated Area

Figure 3

Site and Sample Location Map

Grizzly Energy, LLC

Kersey State Battery

GPS: 32.78601, -104.19064

Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: Checked: jwl Date: 4/1/20

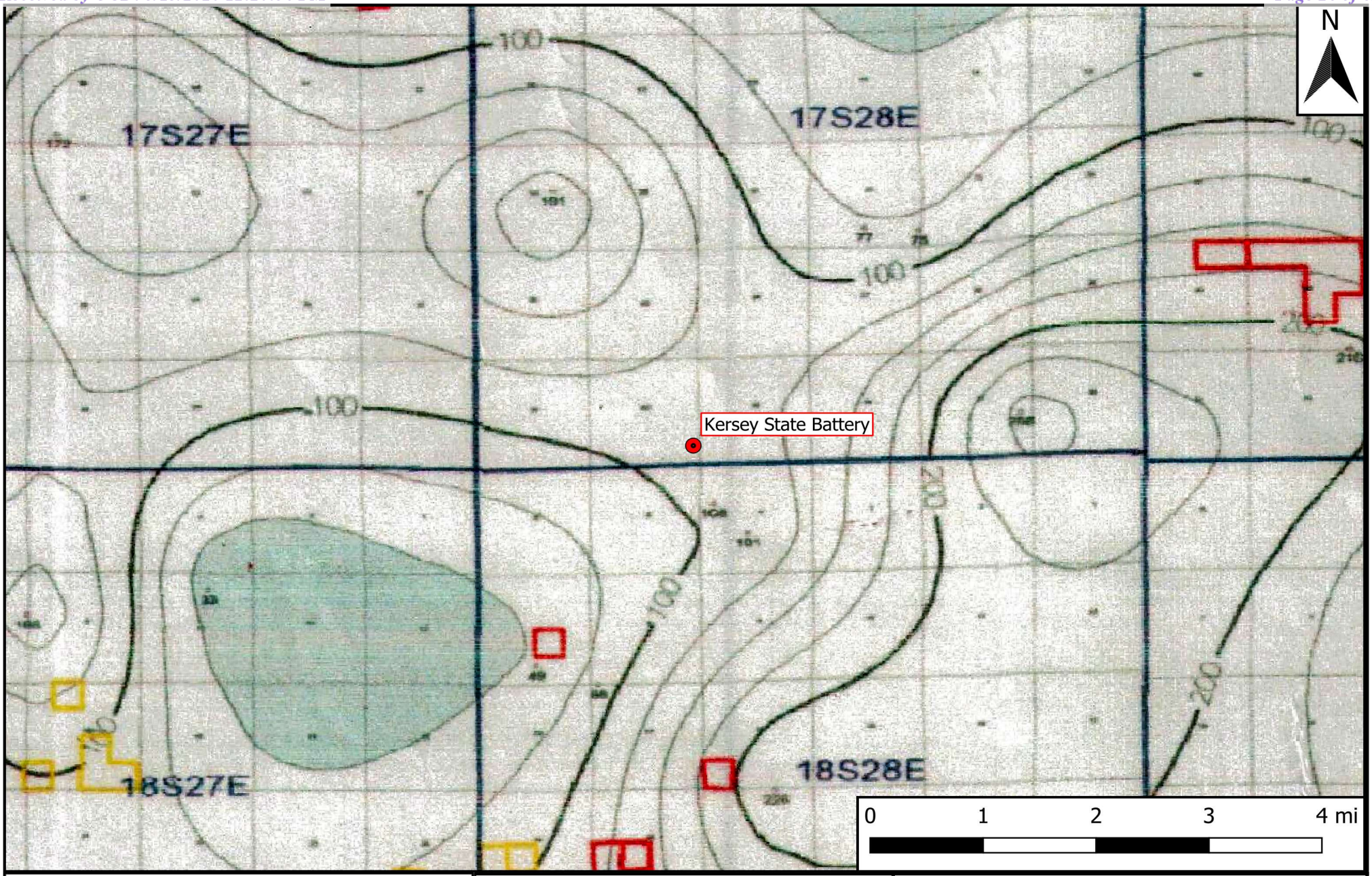
Table 1
Concentrations of BTEX, TPH, and/or Chloride in Soil

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL
Grizzly Energy, LLC
Kersey State Battery
NMOCD Ref. #: 2RP-pending

NMOCD Closure Criteria				10	50	-	-	1000	-	2500	10000
				SW 846 8021B		SW 846 8015M Ext.					4500 Cl
Sample ID	Date	Depth	Soil Status	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)
V1 @ Surf	2/25/2020	Surf	In-Situ	**25.2**	**604**	5,330	17,700	**23,000**	2,900	**25,900**	1,340
V1 @ 3' - R	2/25/2020	3' - R	In-Situ	1.09	**83.5**	457	2,210	**2,670**	160	**2,830**	1,310
V2 @ Surf	2/25/2020	Surf	In-Situ	**13.6**	**471**	2,080	9,990	**12,100**	1,190	**13,300**	16.0
V2 @ 2' - R	2/25/2020	2' - R	In-Situ	0.182	6.72	49.4	315	364	32.6	397	400
NHB @ Surf	2/25/2020	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,760
NHB @ 1'	2/25/2020	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,500
EH1B @ Surf	2/25/2020	Surf	In-Situ	<0.050	<0.300	<10.0	354	354	39.9	394	3,960
EH1B @ 1'	2/25/2020	1'	In-Situ	<0.050	<0.300	<10.0	794	794	116	910	3,840
EH2B @ Surf	2/25/2020	Surf	In-Situ	<0.050	<0.300	<10.0	20.4	20.4	<10.0	20.4	5,360
EH2B @ 1'	2/25/2020	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	5,040
SHB @ Surf	2/25/2020	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	7,680
SHB @ 1'	2/25/2020	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	6,880
WHB @ Surf	2/25/2020	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,200
WHB @ 1'	2/25/2020	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,280
V1 @ 3'	3/20/2020	3'	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	-
V1 @ 4'	3/20/2020	4'	In-Situ	-	-	<10.0	<10.0	<20.0	<10.0	<30.0	-

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

Grizzly Energy, LLC

Kersey State Battery

GPS: 32.78605, -104.19039

Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: mag Checked: jwl Date: 2/12/20

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	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 11857 POD1		RA	ED	1	1	2	05	18S	26E	577784	3625988	2731	235	95	140

Average Depth to Water: **95 feet**

Minimum Depth: **95 feet**

Maximum Depth: **95 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 575790 **Northing (Y):** 3627854.28 **Radius:** 3220

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	RA 11857 POD1	1	1	2	05	18S	26E	577784	3625988

Driller License: 1064 **Driller Company:** DELFORD W. MARTIN

Driller Name: MARTIN, DELFORD

Drill Start Date: 09/25/2012 **Drill Finish Date:** 10/01/2012 **Plug Date:**

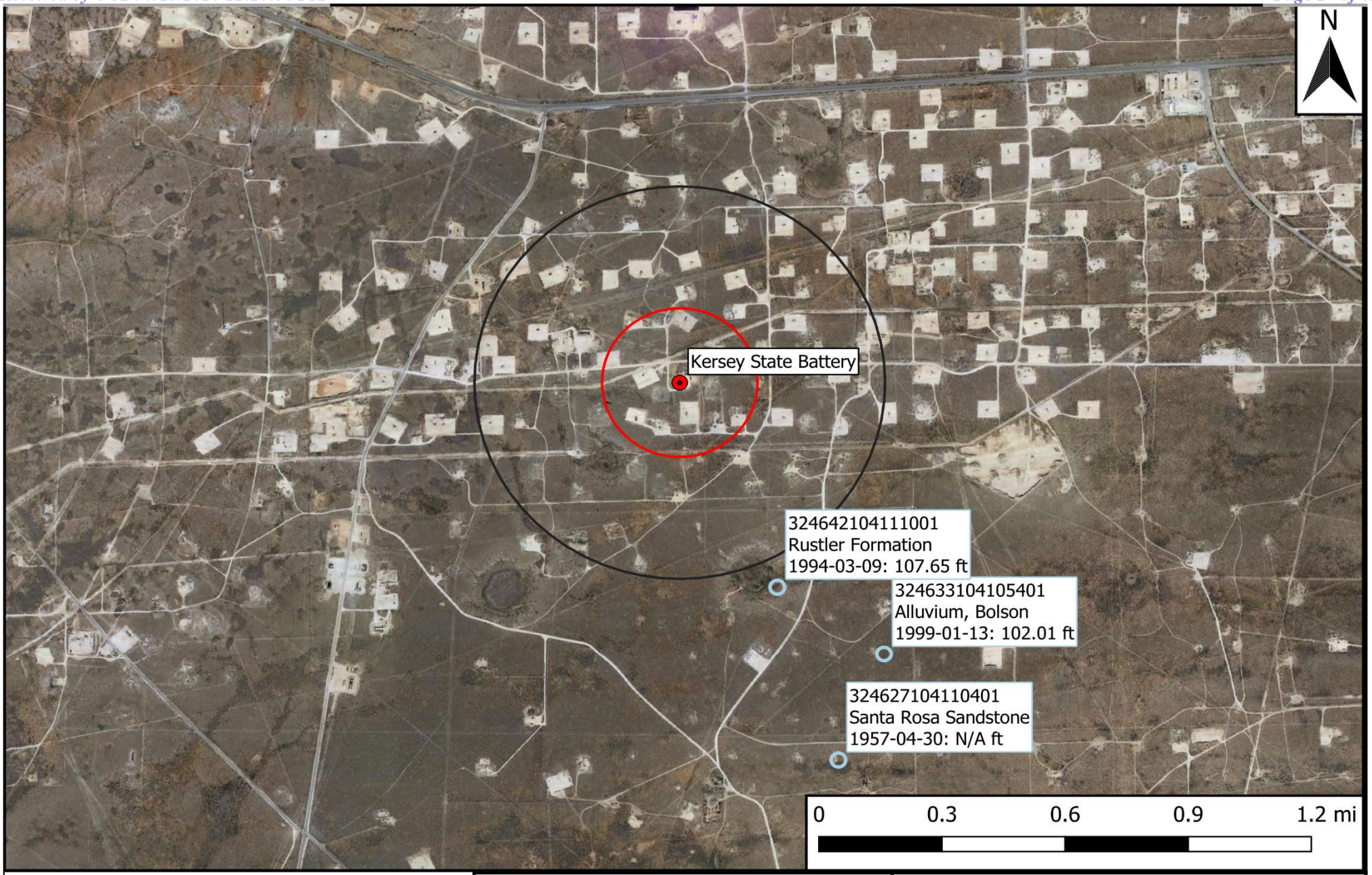
Log File Date: 10/15/2012 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 95 GPM

Casing Size: 5.00 **Depth Well:** 235 feet **Depth Water:** 95 feet

Water Bearing Stratifications:	Top	Bottom	Description
	95	130	Sandstone/Gravel/Conglomerate
	160	235	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	140	235



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

Figure 5
USGS Well Proximity Map
Grizzly Energy, LLC
Kersey State Battery
GPS: 32.78605, -104.19039
Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: mag Checked: jwl Date: 2/12/20

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- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 324633104105401

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

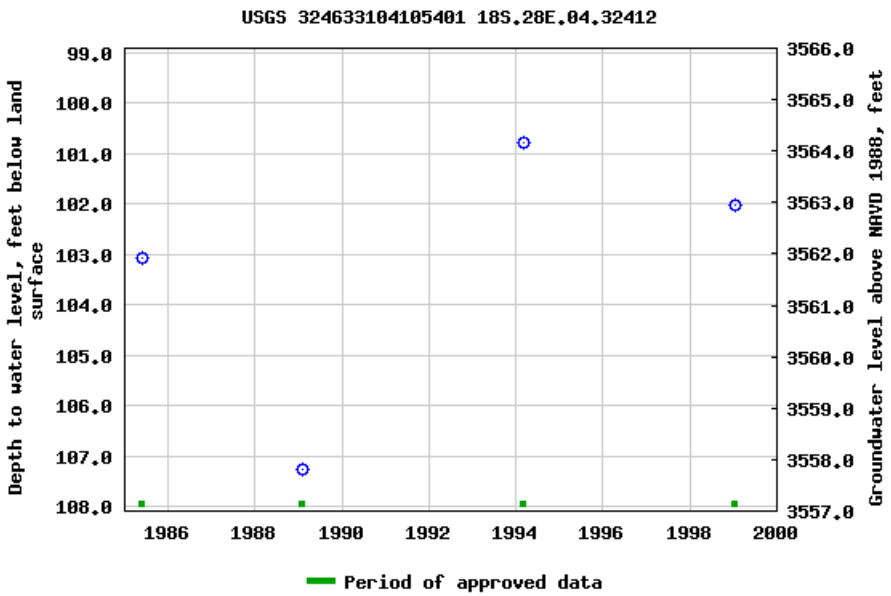
USGS 324633104105401 18S.28E.04.32412

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°46'33", Longitude 104°10'54" NAD27
Land-surface elevation 3,665 feet above NAVD88
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
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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: 2020-02-12 12:01:36 EST
0.61 0.46 nadww01

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

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- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 324642104111001

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

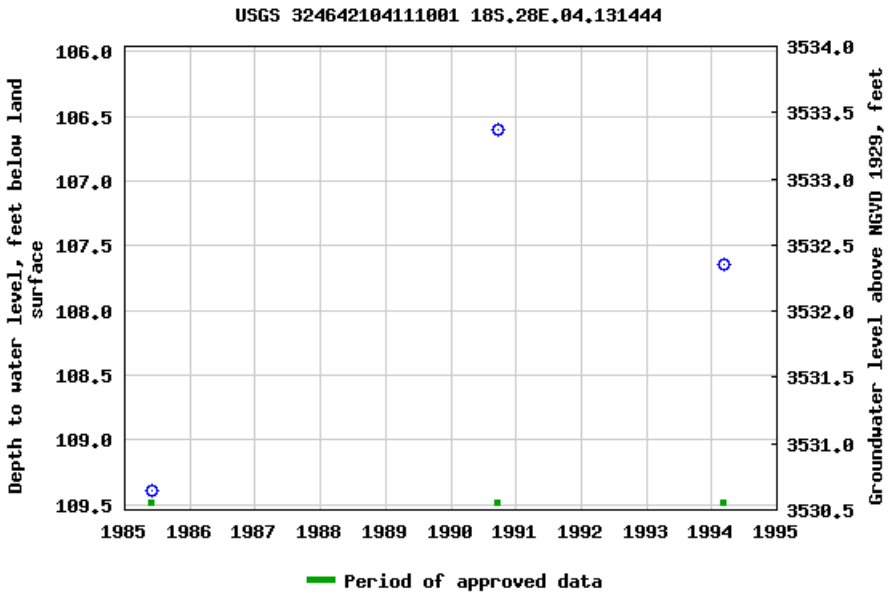
USGS 324642104111001 18S.28E.04.131444

Available data for this site: Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°46'42", Longitude 104°11'10" NAD27
Land-surface elevation 3,640 feet above NGVD29
The depth of the well is 145.00 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

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U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2020-02-12 12:01:37 EST
0.54 0.46 nadww01

Appendix B
Field Data and Soil Profile Logs

ETECH Environmental & Safety Solutions, Inc.

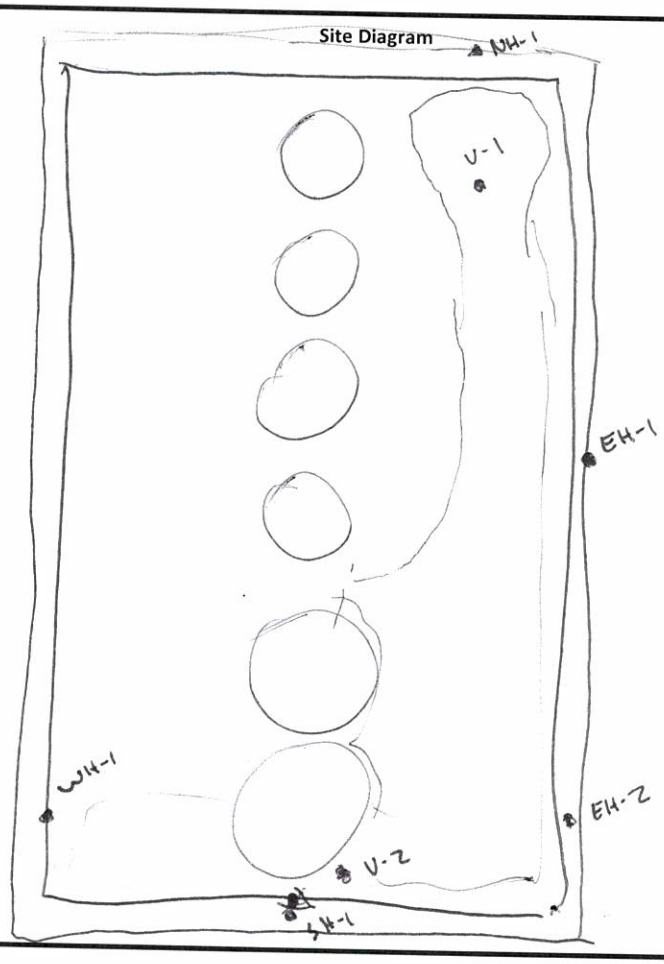
Initial Release Assessment Form

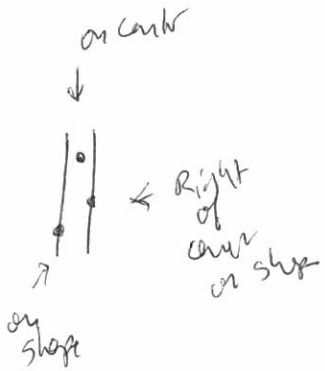
Date: 2/25/20

Project: Kersey State Battery Clean Up Level: 0

Project Number: 11968 Latitude: 32.78601 Longitude: -104.19064

Site Diagram





Notes: Samples on berms were cut down to ~~ground~~ ground level before taking the sample

~Length: ~Width: ~Area: ~Depth:

	Yes	No
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?	☑	☐

ETECH Environmental & Safety Solutions, Inc.

Sample Log

Date: 2/25/20

Project: Kersey State Battery

Project Number: 11968 Latitude: 32.78601 Longitude: -104.19064

Sample ID	PID/Odor	Chloride Conc.		GPS
NH1 @ 0-3"	Yes	9:45	196	
V1 @ 0-3"	Yes	9:50	988	
V1 @ 1'	Yes	9:55	1144	
V1 @ 2'	Very Slight	10:10	664	
EH1 @ 0-3"	—	10:15	2156	
EH2 @ 0-3"	—	10:20	2008	
SH1 @ ~~0~~ 0-3"	—	10:30	1520	
V2 @ ~~0~~ 0-3"	Yes	10:40	<124	
V2 @ 1'	Yes	10:45	168	
WH1 @ ~~Surf~~ 0-3"	Yes	10:50	2736	H+L
V1 @ 2' ~~-3'~~ -R	Yes	11:10	848	
EH1b @ 0-3"	—	11:15	2504	
EH2b @ 0-3"	—	11:20	>2504	*
EH 1b @ 1'	—	11:25	2504	
EH 2b @ 1'	—	11:30	2008	
V2 @ 2' -R	Yes	11:40	236	
WH1b @ 0-3"	—	11:45	2244	
WH1b @ 1'	—	11:50	1100	
NH1b @ 0-3"	—	12:10	1372	
NH 1b @ 1'	—	12:15	944	
SH1b @ 0-3"	—	12:25	>2504	
SH 1b @ 1'	—	12:30	>2504	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

eTECH Environmental & Safety Solutions, Inc.

Soil Profile

Date: 2/25/20

Project: Kersey State Battery

Project Number: 11968 Latitude: 32.78601 Longitude: -104.19064

Depth (ft. bgs)	Description
1	Caliche / caramel
2	Caliche / rocky clay
3	Rocky Clay
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	

ETECH Environmental & Safety Solutions, Inc.

Sample Log

Project: Kersey State Tank Battery Date: 3-2020

Project Number: _____ Latitude: 32.786 5559 Longitude: -104.191429

Sample ID	PID/Odor	Chloride Conc.	GPS
VI at 3 Ft	Light	800	
VI at 4 Ft	none	676	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

Appendix C
Laboratory Analytical Reports

CARDINAL Laboratories

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

March 02, 2020

JOEL LOWRY

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: KERSEY STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/26/20 8:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. 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 accreditated 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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: V1 @ SURFACE (H000612-01)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**25.2**	2.00	02/28/2020	ND	1.88	94.1	2.00	6.03	
Toluene*	**191**	2.00	02/28/2020	ND	1.90	95.0	2.00	6.11	
Ethylbenzene*	**176**	2.00	02/28/2020	ND	1.92	95.9	2.00	5.92	
Total Xylenes*	**212**	6.00	02/28/2020	ND	5.62	93.7	6.00	5.93	
Total BTEX	**604**	12.0	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1340**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**5330**	50.0	02/29/2020	ND	224	112	200	3.29	
DRO >C10-C28*	**17700**	50.0	02/29/2020	ND	240	120	200	4.40	
EXT DRO >C28-C36	**2900**	50.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *394 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *522 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: V1 @ 3' - R (H000612-02)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**1.09**	0.500	03/02/2020	ND	1.88	94.1	2.00	6.03	
Toluene*	**17.0**	0.500	03/02/2020	ND	1.90	95.0	2.00	6.11	
Ethylbenzene*	**26.5**	0.500	03/02/2020	ND	1.92	95.9	2.00	5.92	
Total Xylenes*	**38.9**	1.50	03/02/2020	ND	5.62	93.7	6.00	5.93	
Total BTEX	**83.5**	3.00	03/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *114 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1310**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**457**	50.0	02/28/2020	ND	213	107	200	3.13	QM-07
DRO >C10-C28*	**2210**	50.0	02/28/2020	ND	209	105	200	10.4	QM-07
EXT DRO >C28-C36	**160**	50.0	02/28/2020	ND					

Surrogate: 1-Chlorooctane *121 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *162 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: V2 @ SURFACE (H000612-03)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**13.6**	5.00	02/28/2020	ND	1.88	94.1	2.00	6.03	
Toluene*	**134**	5.00	02/28/2020	ND	1.90	95.0	2.00	6.11	
Ethylbenzene*	**144**	5.00	02/28/2020	ND	1.92	95.9	2.00	5.92	
Total Xylenes*	**179**	15.0	02/28/2020	ND	5.62	93.7	6.00	5.93	
Total BTEX	**471**	30.0	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**2080**	50.0	02/28/2020	ND	213	107	200	3.13	
DRO >C10-C28*	**9990**	50.0	02/28/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	**1190**	50.0	02/28/2020	ND					

Surrogate: 1-Chlorooctane *215 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *362 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: V2 @ 2' - R (H000612-04)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.182**	0.050	03/02/2020	ND	1.88	94.1	2.00	6.03	
Toluene*	**1.63**	0.050	03/02/2020	ND	1.90	95.0	2.00	6.11	
Ethylbenzene*	**1.98**	0.050	03/02/2020	ND	1.92	95.9	2.00	5.92	
Total Xylenes*	**2.93**	0.150	03/02/2020	ND	5.62	93.7	6.00	5.93	
Total BTEX	**6.72**	0.300	03/02/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**49.4**	10.0	02/28/2020	ND	213	107	200	3.13	
DRO >C10-C28*	**315**	10.0	02/28/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	**32.6**	10.0	02/28/2020	ND					

Surrogate: 1-Chlorooctane *88.4 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *95.0 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: NHB @ SURFACE (H000612-05)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.88	94.1	2.00	6.03	
Toluene*	<0.050	0.050	02/28/2020	ND	1.90	95.0	2.00	6.11	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.92	95.9	2.00	5.92	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.62	93.7	6.00	5.93	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1760**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/28/2020	ND	213	107	200	3.13	
DRO >C10-C28*	<10.0	10.0	02/28/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	02/28/2020	ND					

Surrogate: 1-Chlorooctane *78.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *77.6 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: NHB @ 1' (H000612-06)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.93	96.3	2.00	2.88	
Toluene*	<0.050	0.050	02/28/2020	ND	1.96	97.8	2.00	2.93	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.95	97.6	2.00	3.24	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.65	94.2	6.00	3.34	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.3 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1500**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/28/2020	ND	213	107	200	3.13	
DRO >C10-C28*	<10.0	10.0	02/28/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	02/28/2020	ND					

Surrogate: 1-Chlorooctane *88.3 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *87.2 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: EH1B @ SURFACE (H000612-07)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.93	96.3	2.00	2.88	
Toluene*	<0.050	0.050	02/28/2020	ND	1.96	97.8	2.00	2.93	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.95	97.6	2.00	3.24	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.65	94.2	6.00	3.34	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.8 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3960**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	213	107	200	3.13	
DRO >C10-C28*	**354**	10.0	02/29/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	**39.9**	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *79.6 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *97.0 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: EH1B @ 1' (H000612-08)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.93	96.3	2.00	2.88	
Toluene*	<0.050	0.050	02/28/2020	ND	1.96	97.8	2.00	2.93	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.95	97.6	2.00	3.24	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.65	94.2	6.00	3.34	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3840**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	213	107	200	3.13	
DRO >C10-C28*	**794**	10.0	02/29/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	**116**	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *80.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *116 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: EH2B @ SURFACE (H000612-09)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.93	96.3	2.00	2.88	
Toluene*	<0.050	0.050	02/28/2020	ND	1.96	97.8	2.00	2.93	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.95	97.6	2.00	3.24	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.65	94.2	6.00	3.34	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5360**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	213	107	200	3.13	
DRO >C10-C28*	**20.4**	10.0	02/29/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *84.9 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *86.5 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: EH2B @ 1' (H000612-10)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.93	96.3	2.00	2.88	
Toluene*	<0.050	0.050	02/28/2020	ND	1.96	97.8	2.00	2.93	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.95	97.6	2.00	3.24	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.65	94.2	6.00	3.34	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5040**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	213	107	200	3.13	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *86.6 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *86.1 %* *42.2-156*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: SHB @ SURFACE (H000612-11)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.93	96.3	2.00	2.88	
Toluene*	<0.050	0.050	02/28/2020	ND	1.96	97.8	2.00	2.93	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.95	97.6	2.00	3.24	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.65	94.2	6.00	3.34	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7680**	16.0	02/28/2020	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	213	107	200	3.13	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *87.5 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *85.8 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: SHB @ 1' (H000612-12)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.93	96.3	2.00	2.88	
Toluene*	<0.050	0.050	02/28/2020	ND	1.96	97.8	2.00	2.93	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.95	97.6	2.00	3.24	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.65	94.2	6.00	3.34	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6880**	16.0	02/28/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	213	107	200	3.13	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *83.8 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *85.3 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: WHB @ SURFACE (H000612-13)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.93	96.3	2.00	2.88	
Toluene*	<0.050	0.050	02/28/2020	ND	1.96	97.8	2.00	2.93	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.95	97.6	2.00	3.24	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.65	94.2	6.00	3.34	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.5 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3200**	16.0	02/28/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	213	107	200	3.13	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *90.6 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *88.7 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	02/26/2020	Sampling Date:	02/25/2020
Reported:	03/02/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Tamara Oldaker
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: WHB @ 1' (H000612-14)

BTEX 8021B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/28/2020	ND	1.93	96.3	2.00	2.88	
Toluene*	<0.050	0.050	02/28/2020	ND	1.96	97.8	2.00	2.93	
Ethylbenzene*	<0.050	0.050	02/28/2020	ND	1.95	97.6	2.00	3.24	
Total Xylenes*	<0.150	0.150	02/28/2020	ND	5.65	94.2	6.00	3.34	
Total BTEX	<0.300	0.300	02/28/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1280**	16.0	02/28/2020	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2020	ND	213	107	200	3.13	
DRO >C10-C28*	<10.0	10.0	02/29/2020	ND	209	105	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	02/29/2020	ND					

Surrogate: 1-Chlorooctane *84.6 %* *44.3-144*

Surrogate: 1-Chlorooctadecane *84.4 %* *42.2-156*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Cardinal Laboratories *=Accredited Analyte

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**	
Project Manager:	Joel Lowry	**P.O. #:**	
Address:	P.O. Box 301	**Company:**	Vanguard/Grizzly
City:	Lovington **State:** NM **Zip:** 88260	**Attn:**	Carmen Pitt
Phone #:	(575) 396-2378 **Fax #:** (575) 396-1429	**Address:**	
Project #:	11968 **Project Owner:** Grizzly Energy	**City:**	
Project Name:	Kersey State Battery	**State:** **Zip:**	
Project Location:	Rural Eddy	**Phone #:**	
Sampler Name:	Matthew Grieco & Miguel Ramirez	**Fax #:**	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
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**	Chloride	TPH (8015M)	BTEX (8021B)								
H200612																									
1	V1 @ Surf.	G	1			X					X		2/25/20	9:50	X	X	X								
2	V1 @ 3' - R	G	1			X					X		2/25/20	11:10	X	X	X								
3	V2 @ Surf.	G	1			X					X		2/25/20	10:40	X	X	X								
4	V2 @ 2' - R	G	1			X					X		2/25/20	11:40	X	X	X								
5	NHb @ Surf.	G	1			X					X		2/25/20	12:10	X	X	X								
6	NHb @ 1'	G	1			X					X		2/25/20	12:15	X	X	X								
7	EH1b @ Surf.	G	1			X					X		2/25/20	11:15	X	X	X								
8	EH1b @ 1'	G	1			X					X		2/25/20	11:25	X	X	X								
9	EH2b @ Surf.	G	1			X					X		2/25/20	11:20	X	X	X								
10	EH2b @ 1'	G	1			X					X		2/25/20	11:30	X	X	X								

Relinquished By:	**Date:** 2-26-20 **Time:** 0850	**Received By:**	
Relinquished By:	**Date:** **Time:**	**Received By:**	

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: -6.8°c #113

Sample Condition		CHECKED BY: (Initials)
Cool	Intact	
☑ Yes ☐ No	☐ Yes ☐ No	T.O.

Phone Result: ☐ Yes ☐ No **Add'l Phone #:**
Fax Result: ☐ Yes ☐ No **Add'l Fax #:**
REMARKS:

Please email results to pm@etechenv.com.

FORM-006
Revision 1.0

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Etech Environmental & Safety Solutions, Inc.	**BILL TO**	
Project Manager:	Joel Lowry	**P.O. #:**	
Address:	P.O. Box 301	**Company:**	Vanguard/Grizzly
City:	Lovington **State:** NM **Zip:** 88260	**Attn:**	Carmen Pitt
Phone #:	(575) 396-2378 **Fax #:** (575) 396-1429	**Address:**	
Project #:	11968 **Project Owner:** Grizzly Energy	**City:**	
Project Name:	Kersey State Battery	**State:** **Zip:**	
Project Location:	Rural Eddy	**Phone #:**	
Sampler Name:	Matthew Grieco & Miguel Ramirez	**Fax #:**	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
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**	Chloride	TPH (8015M)	BTEX (8021B)									
11	SHb @ Surf.	G	1			X					X		2/25/20	12:25	X	X	X								
12	SHb @ 1'	G	1			X					X		2/25/20	12:30	X	X	X								
13	WHb @ Surf.	G	1			X					X		2/25/20	11:45	X	X	X								
14	WHb @ 1'	G	1			X					X		2/25/20	11:50	X	X	X								

Relinquished By:	**Date:** 2-26-20	**Received By:**	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 0850		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	**Date:**	**Received By:**	**REMARKS:**
	Time:		Please email results to pm@etechenv.com.

Delivered By: (Circle One) Sampler - UPS - Bus - Other: -6.8c #113

Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No

CHECKED BY: (Initials) TO

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CARDINAL Laboratories

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

March 26, 2020

JOEL LOWRY

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: KERSEY STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 03/23/20 15:36.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. 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 accreditated 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,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

Etech Environmental & Safety Solutions
JOEL LOWRY
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received:	03/23/2020	Sampling Date:	03/20/2020
Reported:	03/26/2020	Sampling Type:	Soil
Project Name:	KERSEY STATE BATTERY	Sampling Condition:	Cool & Intact
Project Number:	11968	Sample Received By:	Kelly Jacobson
Project Location:	RURAL EDDY - GRIZZLY ENERGY		

Sample ID: V1 @ 3' (H000886-01)

TPH 8015M **mg/kg** **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/24/2020	ND	211	106	200	1.08	
DRO >C10-C28*	<10.0	10.0	03/24/2020	ND	229	114	200	4.48	
EXT DRO >C28-C36	<10.0	10.0	03/24/2020	ND					

Surrogate: 1-Chlorooctane	*84.6 %*	*44.3-144*
Surrogate: 1-Chlorooctadecane	*91.8 %*	*42.2-156*

Sample ID: V1 @ 4' (H000886-02)

TPH 8015M **mg/kg** **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/24/2020	ND	211	106	200	1.08	
DRO >C10-C28*	<10.0	10.0	03/24/2020	ND	229	114	200	4.48	
EXT DRO >C28-C36	<10.0	10.0	03/24/2020	ND					

Surrogate: 1-Chlorooctane	*81.2 %*	*44.3-144*
Surrogate: 1-Chlorooctadecane	*88.0 %*	*42.2-156*

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For 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**	
Project Manager:	Joel Lowry	**P.O. #:**	
Address:	P.O. Box 301	**Company:**	Vanguard/Grizzly
City:	Lovington **State:** NM **Zip:** 88260	**Attn:**	Carmen Pitt
Phone #:	(575) 396-2378 **Fax #:** (575) 396-1429	**Address:**	
Project #:	11968 **Project Owner:** Grizzly Energy	**City:**	
Project Name:	Kersey State Battery	**State:**	**Zip:**
Project Location:	Rural Eddy	**Phone #:**	
Sampler Name:	David Robinson	**Fax #:**	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chloride	TPH (8015M)	BTEX (8021B)
H000886																	
1	V1 @ 3'	G	1			X					X		3/20/20			X	
2	V1 @ 4'	G	1			X					X		3/20/20			X	

Relinquished By:	**Date:** 3/23/20	**Received By:**	
	Time: 15:36		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Delivered By: (Circle One) −1.9°C
Sampler - UPS - Bus - Other: #113

Sample Condition Cool: ☐ Yes ☐ No Intact: ☒ Yes ☐ No

CHECKED BY: (Initials) BS

Phone Result: ☐ Yes ☐ No **Add'l Phone #:**
Fax Result: ☐ Yes ☐ No **Add'l Fax #:**
REMARKS:

Please email results to pm@etechenv.com.

FORM-006
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Appendix D
Photographic Log

Photographic Log

Dates: 02/25/2020 - 02/25/2020

Photo Number: 1 **Photo Direction:** West **Photo Description:** Southern end of spill showing stain around tank base.	

Photo Number: 2 **Photo Direction:** Northwest **Photo Description:** Middle section of spill taken from the south.	

Photographic Log

Dates: 02/25/2020 - 02/25/2020

Photo Number: 3 **Photo Direction:** Northwest **Photo Description:** Northern end of spill showing the area around a pump.	

Photo Number: 4 **Photo Direction:** South **Photo Description:** View of the middle of the spill taken from northern end. The thinner flow section is shown.