

## Report Type: Closure Report 2RP-5354

### General Site Information:

Site:	Lost State AIS State TB					
Company:	EOG Resources					
Section, Township and Range	Unit N	Sec 36	T 21S	R 31E		
County:	Eddy County					
GPS:	32.42950			-103.73350		
Surface Owner:	State					
Directions:	From the intersection of Wipp Rd and Louis Whitlock Rd in rural Eddy Co., New Mexico, head north on Lous Whitlock for 5.23 miles, turn east onto unnamed lease road and go 1.82 miles, turn north and go 0.1 miles and arrive at location.					

### Release Data:

<b>Date Released:</b>	3/26/2019
<b>Type Release:</b>	Produced Water and Crude Oil
<b>Source of Contamination:</b>	Water tank top blew off and tank was on its side
<b>Fluid Released:</b>	152 bbls water / 8 bbls oil
<b>Fluids Recovered:</b>	61 bbls water / 4 bbls oil

### Official Communication:

<b>Name:</b>	James Kennedy		Clair Gonzales
<b>Company:</b>	EOG Resources		Tetra Tech
<b>Address:</b>	5509 Champions Dr		901 W. Wall St.
			Ste 100
<b>City:</b>	Midland Texas, 79706		Midland, Texas
<b>Phone number:</b>	(432) 258-4346		(432) 682-4559
<b>Fax:</b>			
<b>Email:</b>	<a href="mailto:James_Kennedy@eogresources.com">James_Kennedy@eogresources.com</a>		<a href="mailto:Clair.Gonzales@tetrattech.com">Clair.Gonzales@tetrattech.com</a>

### Site Characterization

<b>Depth to Groundwater:</b>	133' below surface
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### Recommended Remedial Action Levels (RRALs)

<b>Benzene</b>	<b>Total BTEX</b>	<b>TPH (GRO+DRO+MRO)</b>	<b>GRO + DRO</b>	<b>Chlorides</b>
10 mg/kg	50 mg/kg	2,500 mg/kg	1,000 mg/kg	20,000 mg/kg



May 29, 2019

Mr. Mike Bratcher  
District Supervisor  
Oil Conservation Division, District 2  
811 S. First Street  
Artesia, New Mexico 88210

**Re: Closure Report for the EOG Resources, Lost Tank AIS State TB, Unit N, Section 36, Township 21 South, Range 31 East, Eddy County, New Mexico.  
2RP-5354**

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources (EOG) to remediate a release that occurred at the, Lost Tank AIS State TB, Unit N, Section 36, Township 21 South, Range 31 East, Eddy County, New Mexico (Site). The spill site coordinates are 32.42950°, -103.73350°. The site location is shown on Figures 1 and 2.

## Background

According to the State of New Mexico C-141 Initial Report the release was discovered on March 26, 2019. Approximately 152 barrels of produced water and 8 barrels of crude oil was released due to the tank toppling on its side for unknown reasons. The release was contained within the bermed tank battery. A vacuum truck was dispatched to remove all free-standing fluids, recovering 61 barrels of produced water and 4 barrels of crude oil. The release impacted an area approximately 130' X 25'. The initial C-141 Forms are included in Appendix A.

## Site Characterization

A site characterization was performed for the site and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances and the site is in a low karst potential area. The nearest well is listed in the USGS National Water Information System website in Section 15, Township 22 South, Range 31 East, approximately 3.25 miles southwest of the site, and has a reported depth to groundwater of 133 feet below ground surface. The groundwater data is shown in Appendix B.

## Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed

Tetra Tech

4000 North Big Spring, Suite 401, Midland, TX 79705

Tel 432.682.4559 Fax 432.682.3946 [www.tetrattech.com](http://www.tetrattech.com)



RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the site characterization, the proposed RRAL for TPH is 2,500 mg/kg (GRO + DRO + MRO) and 1,000mg/kg (GRO + DRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 20,000 mg/kg.

### Remediation Activities

Tetra Tech personnel were onsite from April 8 through April 15, 2019 to supervise the remediation activities. The impacted area within the tank battery was excavated to total depths of 5.0' – 7.0' below surface. Bottom hole and sidewall confirmation samples were collected every 200 square feet to ensure proper removal of the impacted soils. Nine (9) bottom hole composite samples (Eastside BH-A, Eastside BH-B, Eastside BH-C, Westside BH-1, Westside BH-2, Westside C BH, Westside D BH-1, Westside E BH-1, Westside F BH-1) and seven (7) sidewall composite samples (Eastside NSW 3', Eastside SSW, Eastside ESW 4', Eastside WSW 5', Westside B SSW 3', Westside NSW, and Westside SSW) were collected in. The samples were submitted to the laboratory to be analyzed for TPH method 8015 extended, BTEX method 8021B, and Chloride by EPA Method 300.0. The sampling results are summarized in Table 1. The excavation depths and sample locations are shown in Figure 4.

Referring to Table 1, all collected confirmation samples showed benzene, total BTEX, TPH, and chloride concentrations below the RRAL's.

Approximately 200 cubic yards of material was excavated and transported offsite for proper disposal. The areas were then backfilled with clean material to surface grade.

### Conclusion

Based on the laboratory results and remediation activities performed EOG requests closure of this spill issue. The final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or remediation activities for this site, please call at (432) 682-4559.

Respectfully submitted,  
TETRA TECH

A handwritten signature in blue ink that reads 'Clair Gonzales'.

Clair Gonzales,  
Project Manager, PG

cc: James Kennedy – EOG  
Todd Wells - EOG  
Jim Amos - BLM

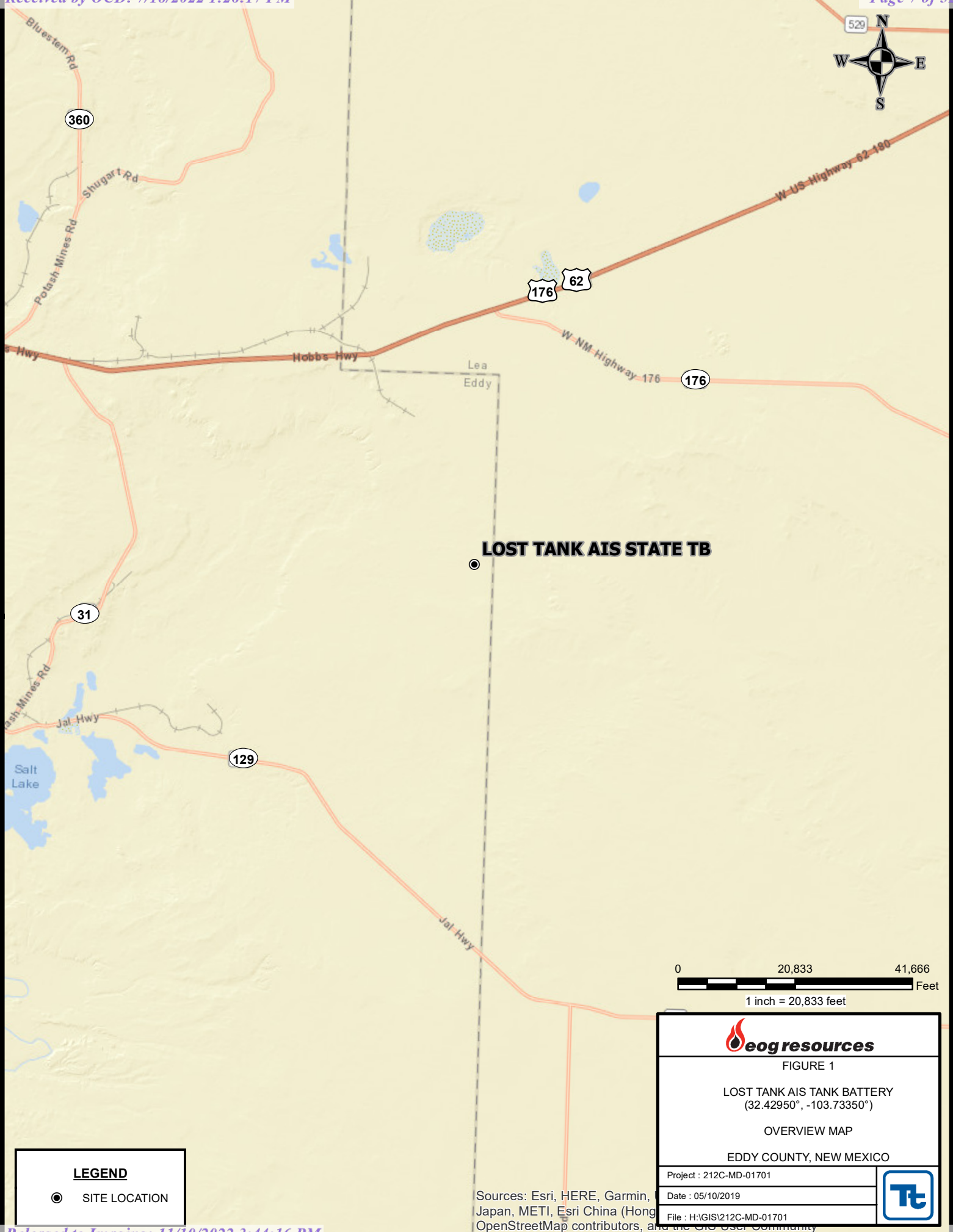
## Tables



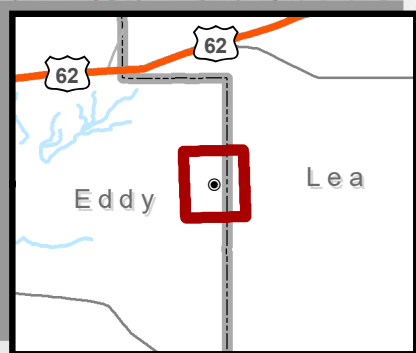
**Table 1**  
**EOG**  
**Lost Tank AIS State TB**  
**Eddy County, New Mexico**

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
East Side - BH-A	4/11/2019	-	7.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,120
East Side - BH-B	4/11/2019	-	5.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	256
East Side - BH-C	4/11/2019	-	5.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
East Side - NSW 3'	4/11/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
East Side - SSW	4/11/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	128
East Side - ESW 4'	4/11/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
East Side - WSW 5'	4/11/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	800
West Side - BH-1	4/11/2019	-	5.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	288
West Side - BH-2	4/11/2019	-	5.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
West Side B SSW 3'	4/11/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	224
West Side NSW	4/15/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	944
West Side SSW	4/15/2019	-	5.0	X		10.2	756	244	1,010	<0.050	<0.050	<0.050	<0.150	<0.300	9,060
West Side C BH	4/15/2019	-	5.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
West Side D BH-1	4/15/2019	-	5.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	256
West Side E BH-1	4/15/2019	-	5.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	464
West Side F BH-1	4/15/2019	-	5.0	X		<10.0	<10.0	11.5	11.5	<0.050	<0.050	<0.050	<0.150	<0.300	2,680

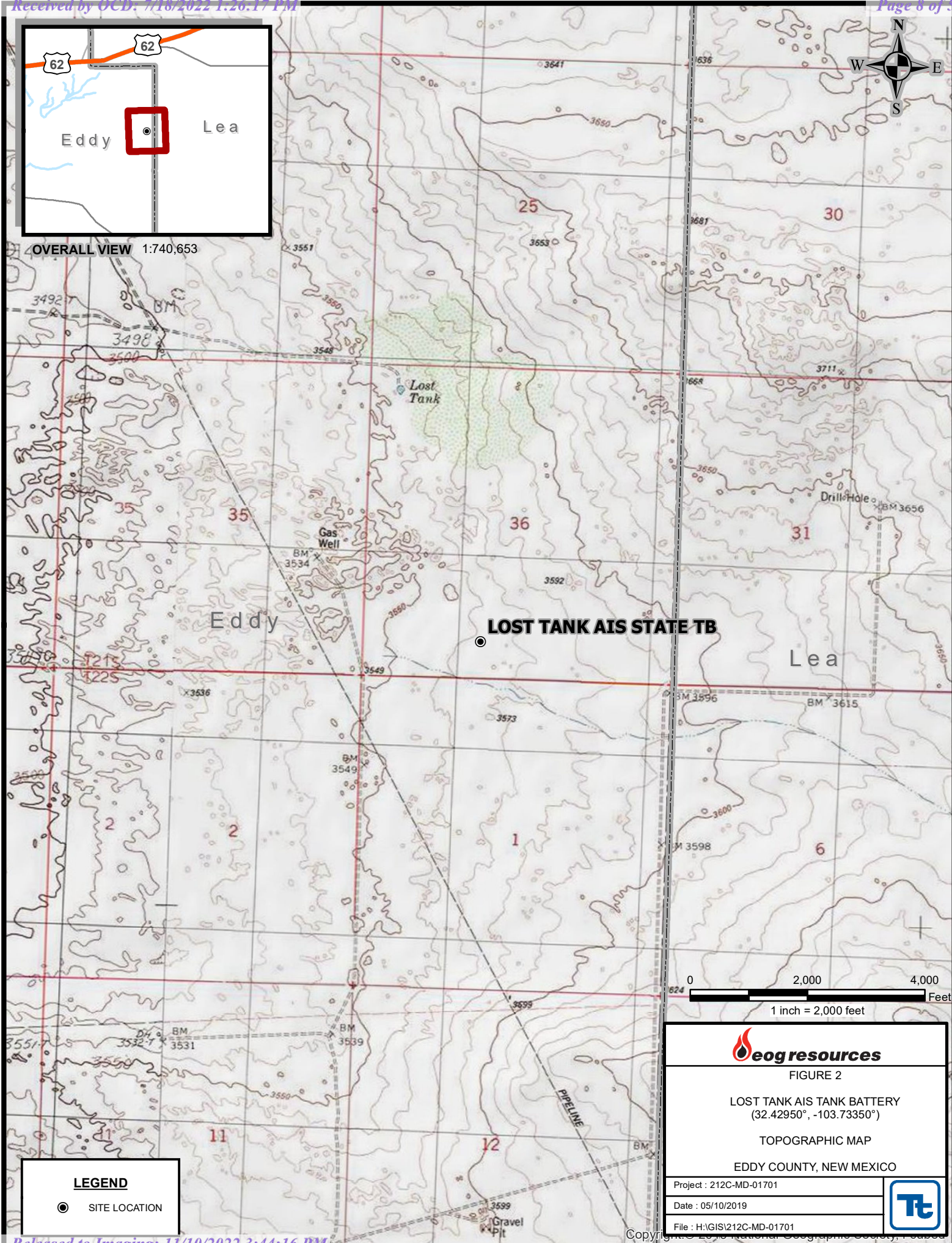
## Figures







OVERALL VIEW 1:740,653



**LEGEND**

● SITE LOCATION

**eog resources**

FIGURE 2

LOST TANK AIS TANK BATTERY  
(32.42950°, -103.73350°)

TOPOGRAPHIC MAP

EDDY COUNTY, NEW MEXICO

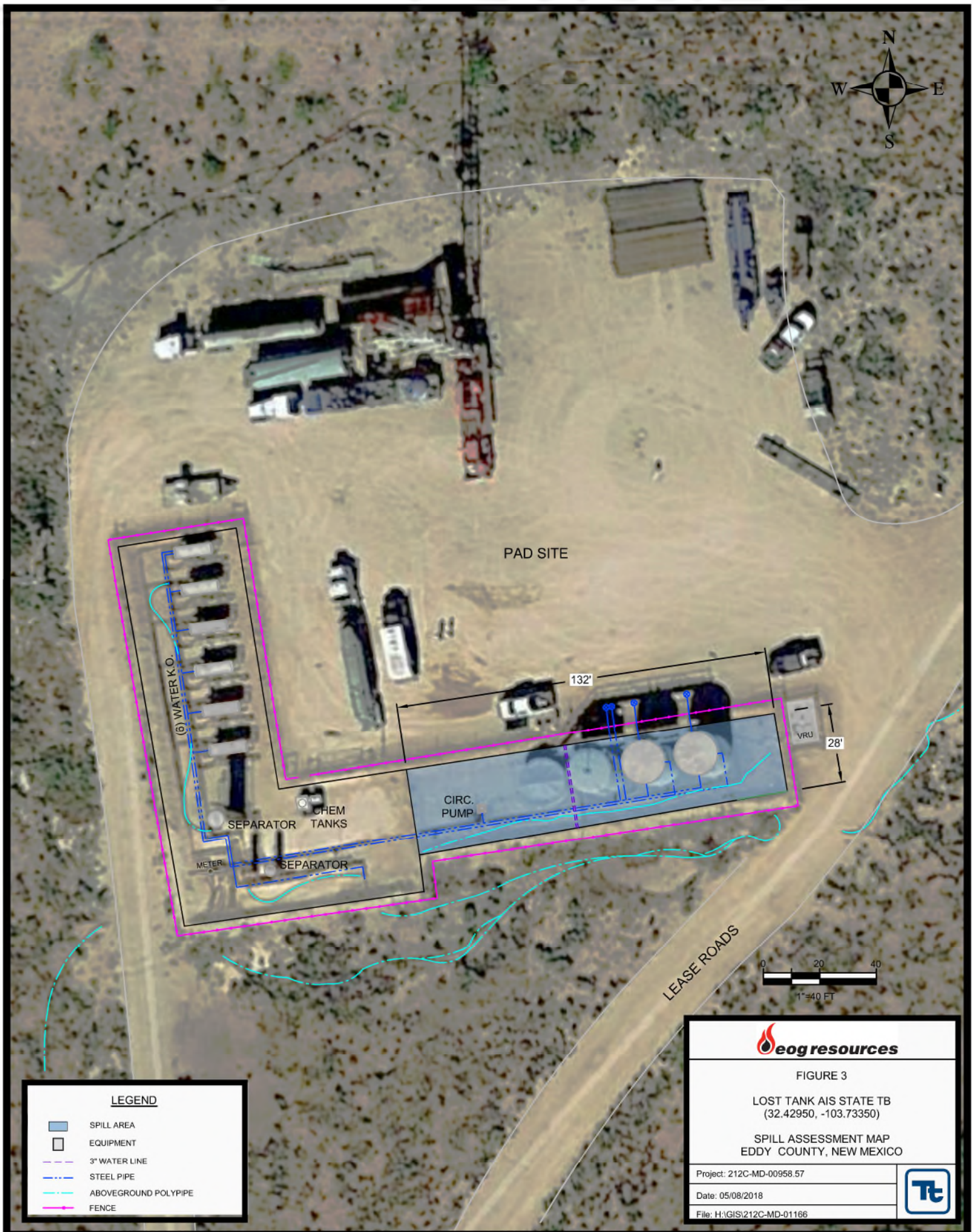
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Date : 05/10/2019

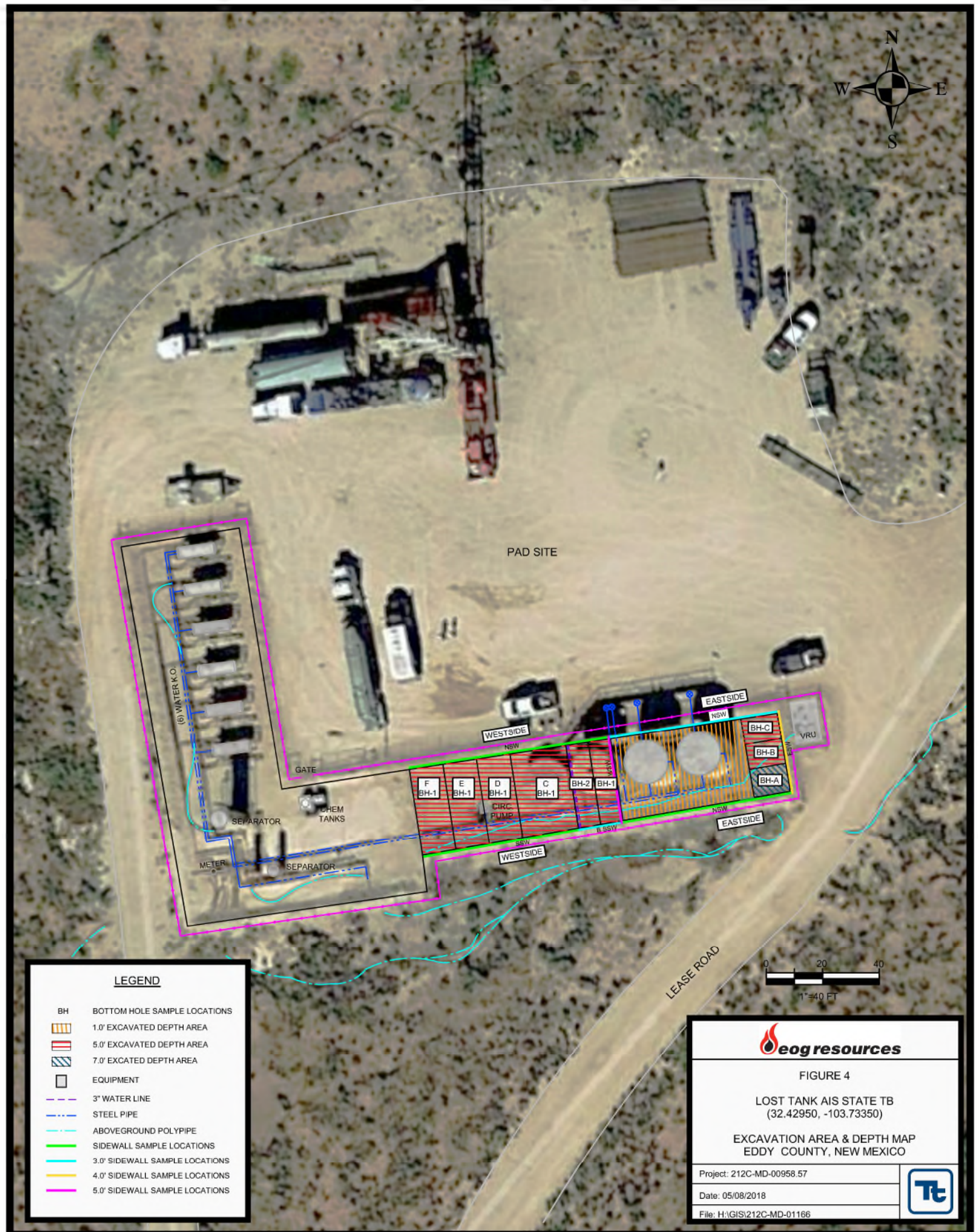
File : H:\GIS\212C-MD-01701











## Photos



EOG Resources  
Lost Tank AIS State TB  
Eddy County, New Mexico



View East – Area of Excavation



View Northeast – Area of Excavation



EOG Resources  
Lost Tank AIS State TB  
Eddy County, New Mexico



View North – Area of Excavation



View South – Area of Excavation

# Appendix A

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	NAB1910938398
District RP	2RP-5354
Facility ID	
Application ID	pAB1910937549

## Release Notification

### Responsible Party

Responsible Party EOG Resources	OGRID 7377
Contact Name Todd Wells	Contact Telephone (432) 686-3613
Contact email Todd_Wells@eogresources.com	Incident # (assigned by OCD) NAB1910938398
Contact mailing address 5509 Champions Drive Midland, TX 79706	

### Location of Release Source

Latitude 32.42950°

Longitude -103.73350°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Lost State AIS State Tank Battery	Site Type Tank Battery
Date Release Discovered 3/26/19	API# (if applicable) 30-015-26586

Unit Letter	Section	Township	Range	County
SE/SW **	36	21S	31E	Eddy

\*\* **N** *AB*  
Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 8	Volume Recovered (bbls) 4
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 152	Volume Recovered (bbls) 61
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: LO was notified by roustabout crew driving by the location that the top of the water tank had blown off and the tank was on its side. Upon arrival, the LO observed what had happened and he turned off the wells, isolated the facility, notified the foreman and called for a vacuum truck.

State of New Mexico  
Oil Conservation Division

Incident ID	NAB1910938398
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Was this a major release as defined by 19.15.29.7(A) NMAC?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Release volume more than 25 bbls  <b>Yes, it is a major release. Answer questions in yellow below.</b>
<b>If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? No</b>	

### Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Todd Wells</u>	Title: <u>Environmental Specialist</u>
Signature: <u>Todd Wells</u>	Date: <u>4-4-19</u>
email: <u>Todd_Wells@eogresources.com</u>	Telephone: <u>(432) 686-3613</u>
<b><u>OCD Only</u></b>	
Received by: <u>Ana Maria Bortamante</u>	Date: <u>4/19/2019</u>

Incident ID	Jocelyn Harimon
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?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input 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 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 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 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 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 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 type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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



State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	NAB1910938398
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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: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: Todd Wells Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: Jocelyn Harimon Date: 11/10/2022

Incident ID	NAB1910938398
District RP	
Facility ID	
Application ID	

## Closure

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

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

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

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: Todd Wells Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: Jocelyn Harimon Date: 11/10/2022

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

Closure Approved by: Jocelyn Harimon Date: 11/10/2022

Printed Name: Jocelyn Harimon Title: Environmental Specialist

## Appendix B



**Water Well Data**  
**Average Depth to Groundwater (ft)**  
**EOG-Lost Tank AIS State TB**  
**Lea County, New Mexico**

20 South			31 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36 <b>80</b>

20 South			32 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

20 South			33 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

21 South			30 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

21 South			31 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

21 South			32 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

22 South			30 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

22 South			31 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

22 South			32 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19 (S)	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

**88** New Mexico State Engineers Well Reports

**105** USGS Well Reports

**90** Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)  
 Geology and Groundwater Resources of Eddy County, NM (Report 3)

**34** NMOCD - Groundwater Data

**123** Tetra Tech installed temporary wells and field water level

**143** NMOCD Groundwater map well location



USGS Home  
Contact USGS  
Search USGS

## National Water Information System: Web Interface

USGS Water Resources

Data Category:


Groundwater ▼

Geographic Area:

New Mexico ▼

GO

Click to hide News Bulletins

- [Introducing The Next Generation of USGS Water Data for the Nation](#)
- [Full News](#) 

Groundwater levels for New Mexico

Click to hide state-specific text

## Search Results -- 1 sites found

site\_no list =

- 322333103461301

Minimum number of levels = 1

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

## USGS 322333103461301 22S.31E.15.13223

Available data for this site

Groundwater: Field measurements ▼

GO

Eddy County, New Mexico

Hydrologic Unit Code --

Latitude 32°23'40", Longitude 103°46'15" NAD27

Land-surface elevation 3,456 feet above NAVD88

The depth of the well is 170 feet below land surface.

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

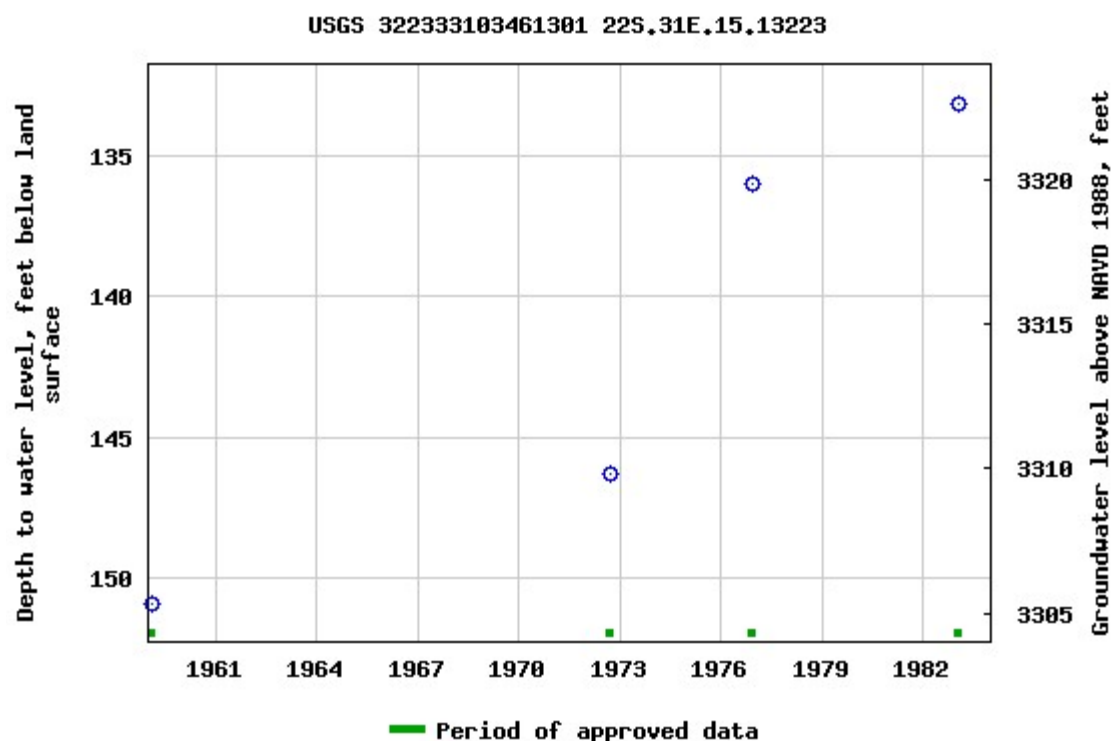
### Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



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

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**Title: Groundwater for New Mexico: Water Levels**

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



Page Contact Information: [New Mexico Water Data Maintainer](#)

Page Last Modified: 2019-05-06 17:09:16 EDT

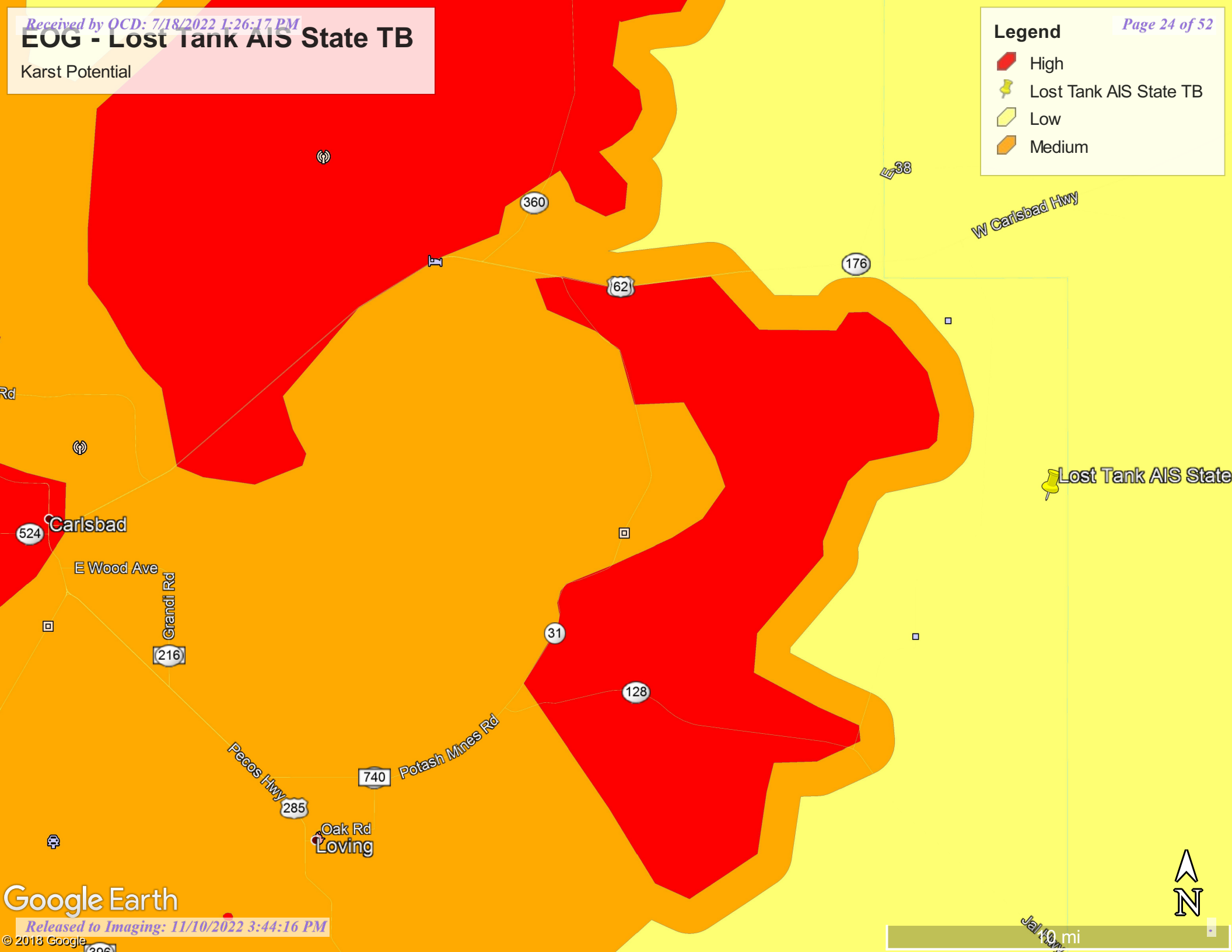
0.96 0.89 nadww01

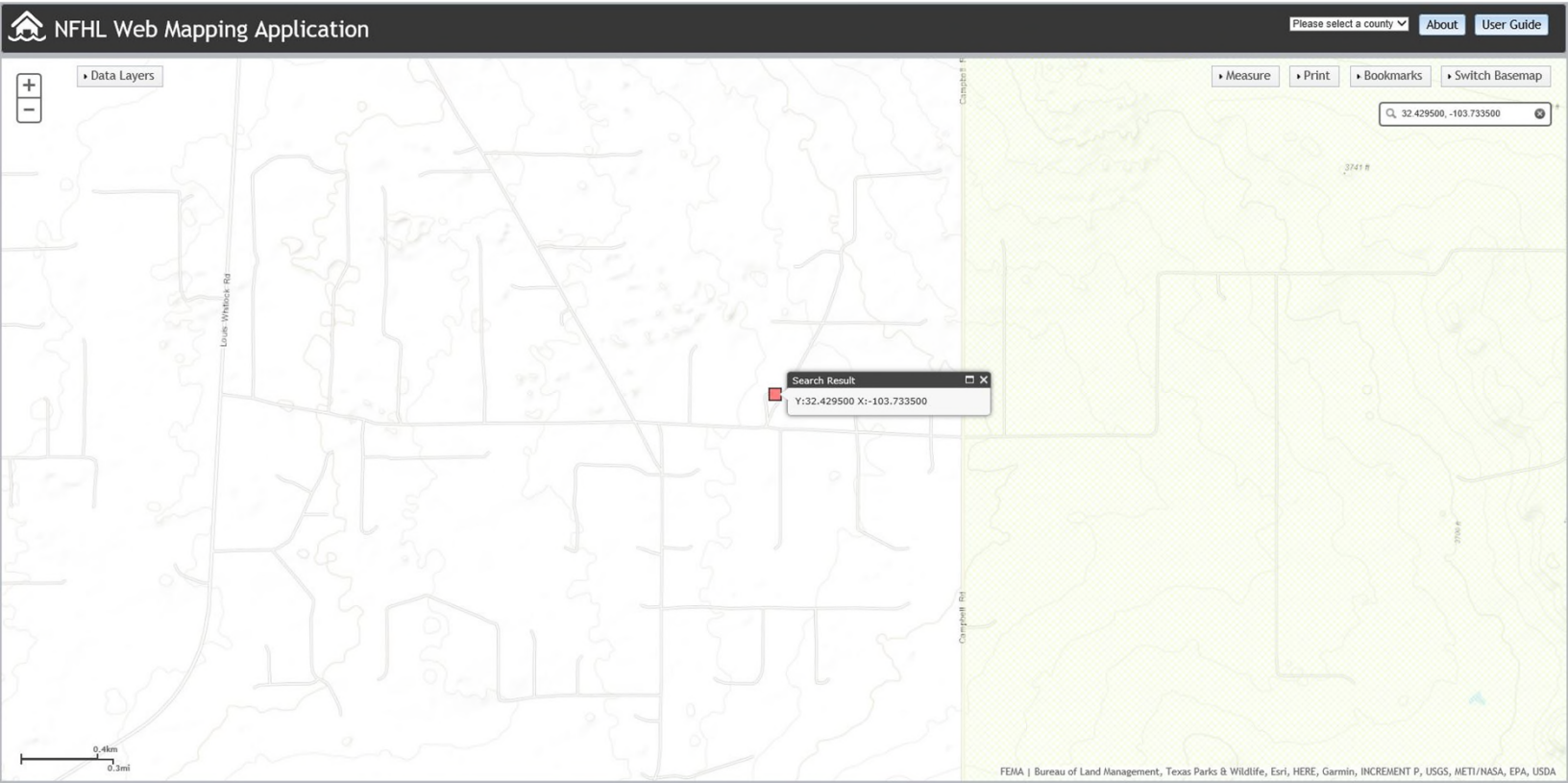
# EOG - Lost Tank AIS State TB

Karst Potential

## Legend

- High
- Lost Tank AIS State TB
- Low
- Medium





## Appendix C



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

---

April 15, 2019

JAMES KENNEDY

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: LOST TANK AIS STATE TB

Enclosed are the results of analyses for samples received by the laboratory on 04/12/19 15:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01701	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: EAST SIDE - BH A 7' (H901363-01)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25	
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68	
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88	
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51	
Total BTEX	<0.300	0.300	04/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1120	16.0	04/15/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 88.6 % 41-142

Surrogate: 1-Chlorooctadecane 93.0 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01701	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: EAST SIDE - BH B 5' (H901363-02)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25		
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68		
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88		
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51		
Total BTEx	<0.300	0.300	04/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	04/15/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 86.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.2 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01701	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: EAST SIDE - SSW (H901363-03)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25		
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68		
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88		
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51		
Total BTX	<0.300	0.300	04/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	04/15/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 88.3 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01701	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: EAST SIDE - WSW 5' (H901363-04)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25		
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68		
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88		
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51		
Total BTX	<0.300	0.300	04/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	800	16.0	04/15/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 94.4 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/12/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01701	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: EAST SIDE - BH C 5' (H901363-05)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25		
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68		
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88		
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51		
Total BTEx	<0.300	0.300	04/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/15/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 88.4 % 41-142

Surrogate: 1-Chlorooctadecane 94.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/12/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01701	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: EAST SIDE - NSW 3' (H901363-06)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25		
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68		
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88		
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51		
Total BTEx	<0.300	0.300	04/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/15/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 96.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01701	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: EAST SIDE - ESW 4' (H901363-07)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25		
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68		
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88		
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51		
Total BTEx	<0.300	0.300	04/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/15/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 96.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



---

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---

### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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\*=Accredited Analyte

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

---

Celey D. Keene, Lab Director/Quality Manager



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

Released to Imaging: 11/10/2022 3:44:16 PM





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

---

April 15, 2019

JAMES KENNEDY

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: LOST TANK AIS STATE TB

Enclosed are the results of analyses for samples received by the laboratory on 04/12/19 15:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: WEST SIDE - SEC. B BH1 5' (H901362-01)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25	
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68	
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88	
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51	
Total BTEX	<0.300	0.300	04/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	288	16.0	04/15/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 90.7 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: WEST SIDE - SEC. B BH2 5' (H901362-02)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25		
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68		
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88		
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51		
Total BTEx	<0.300	0.300	04/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	04/15/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 90.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/12/2019	Sampling Date:	04/11/2019
Reported:	04/15/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

**Sample ID: WEST SIDE - SEC. B SSW 3' (H901362-03)**

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/13/2019	ND	2.06	103	2.00	2.25		
Toluene*	<0.050	0.050	04/13/2019	ND	1.93	96.6	2.00	1.68		
Ethylbenzene*	<0.050	0.050	04/13/2019	ND	2.05	102	2.00	1.88		
Total Xylenes*	<0.150	0.150	04/13/2019	ND	6.21	103	6.00	2.51		
Total BTEx	<0.300	0.300	04/13/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	04/15/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/13/2019	ND	205	102	200	3.08	
DRO >C10-C28*	<10.0	10.0	04/13/2019	ND	201	101	200	2.86	
EXT DRO >C28-C36	<10.0	10.0	04/13/2019	ND					

Surrogate: 1-Chlorooctane 91.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

---

Celey D. Keene, Lab Director/Quality Manager





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April 16, 2019

JAMES KENNEDY

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: LOST TANK AIS STATE TB

Enclosed are the results of analyses for samples received by the laboratory on 04/15/19 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager





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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/15/2019	Sampling Date:	04/15/2019
Reported:	04/16/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-01701	Sample Received By:	Jodi Henson
Project Location:	EOG - EDDY CO NM		

**Sample ID: WEST SIDE NSW COMP (H901379-01)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2019	ND	2.07	104	2.00	7.28	
Toluene*	<0.050	0.050	04/16/2019	ND	2.19	110	2.00	5.29	
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.19	110	2.00	2.41	
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.42	107	6.00	4.48	
Total BTEX	<0.300	0.300	04/16/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	944	16.0	04/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	<10.0	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	<10.0	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/15/2019	Sampling Date:	04/15/2019
Reported:	04/16/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-01701	Sample Received By:	Jodi Henson
Project Location:	EOG - EDDY CO NM		

**Sample ID: WEST SIDE SSW COMP (H901379-02)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2019	ND	2.07	104	2.00	7.28	
Toluene*	<0.050	0.050	04/16/2019	ND	2.19	110	2.00	5.29	
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.19	110	2.00	2.41	
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.42	107	6.00	4.48	
Total BTEx	<0.300	0.300	04/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 126 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9060	16.0	04/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	10.2	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	756	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	244	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/15/2019	Sampling Date:	04/15/2019
Reported:	04/16/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-01701	Sample Received By:	Jodi Henson
Project Location:	EOG - EDDY CO NM		

**Sample ID: WEST SIDE SECTION 'C' BH (H901379-03)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/16/2019	ND	2.07	104	2.00	7.28		
Toluene*	<0.050	0.050	04/16/2019	ND	2.19	110	2.00	5.29		
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.19	110	2.00	2.41		
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.42	107	6.00	4.48		
Total BTX	<0.300	0.300	04/16/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	04/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	<10.0	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	<10.0	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 98.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/15/2019	Sampling Date:	04/15/2019
Reported:	04/16/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-01701	Sample Received By:	Jodi Henson
Project Location:	EOG - EDDY CO NM		

**Sample ID: WEST SIDE SECTION 'D' BH-1 (H901379-04)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/16/2019	ND	2.12	106	2.00	0.356		
Toluene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.640		
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.214		
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.52	109	6.00	0.243		
Total BTEX	<0.300	0.300	04/16/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	04/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	<10.0	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	<10.0	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 97.1 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/15/2019	Sampling Date:	04/15/2019
Reported:	04/16/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-01701	Sample Received By:	Jodi Henson
Project Location:	EOG - EDDY CO NM		

**Sample ID: WEST SIDE SECTION 'E' BH-1 (H901379-05)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/16/2019	ND	2.12	106	2.00	0.356		
Toluene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.640		
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.214		
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.52	109	6.00	0.243		
Total BTEX	<0.300	0.300	04/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	464	16.0	04/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	<10.0	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	<10.0	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 97.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH  
 JAMES KENNEDY  
 901 WEST WALL STREET , STE 100  
 MIDLAND TX, 79701  
 Fax To: (432) 682-3946

Received:	04/15/2019	Sampling Date:	04/15/2019
Reported:	04/16/2019	Sampling Type:	Soil
Project Name:	LOST TANK AIS STATE TB	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-01701	Sample Received By:	Jodi Henson
Project Location:	EOG - EDDY CO NM		

**Sample ID: WEST SIDE SECTION 'F' BH-1 (H901379-06)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/16/2019	ND	2.12	106	2.00	0.356	
Toluene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.640	
Ethylbenzene*	<0.050	0.050	04/16/2019	ND	2.26	113	2.00	0.214	
Total Xylenes*	<0.150	0.150	04/16/2019	ND	6.52	109	6.00	0.243	
Total BTEX	<0.300	0.300	04/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2680	16.0	04/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	04/16/2019	ND	207	103	200	0.562	
DRO >C10-C28*	<10.0	10.0	04/16/2019	ND	194	97.1	200	0.589	
EXT DRO >C28-C36	11.5	10.0	04/16/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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### Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

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Celey D. Keene, Lab Director/Quality Manager





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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Tetra Tech</u>		<b>BILL TO</b>		ANALYSIS REQUEST																													
Project Manager: <u>Claire Gonzales</u>		P.O. #:																															
Address: <u>9010 Wall</u>		Company: <u>EOLG</u>																															
City: <u>MIDLAND</u> State: <u>TX</u> Zip: <u>79711</u>		Attn: <u>James Kennedy</u>																															
Phone #: <u>432-634-6443</u> Fax #:		Address:																															
Project #: <u>2020-MD-D170</u> Project Owner: <u>EOLG Resources</u>		City: <u>MIDLAND</u>																															
Project Name: <u>Lost Tank AIS STATE BATTERY</u>		State: <u>TX</u> Zip: <u>79711</u>																															
Project Location: <u>EBDy County</u>		Phone #: <u>432-258-4346</u>																															
Sampler Name: <u>Bucky Moore</u>		Fax #:																															
FOR LAB USE ONLY		PRESERV.		SAMPLING																													
Lab I.D. Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME		TPH		BTex		Chlorides	
<u>H901379</u>																																	
1 West Side NSW Composite																																	
2 West Side SSW Composite																																	
3 West Side Section 'E' BH																																	
4 West Side Section 'D' BH																																	
5 West Side Section 'E' BH																																	
6 West Side Section 'F' BH																																	

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Relinquished By: <u>Bucky Moore</u>	Date: <u>4/15/19</u>	Received By: <u>Joelle Henderson</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Time:	Time:	Time:		
Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: <u>15:40 / #97</u>	Cool <input type="checkbox"/> Intact <input type="checkbox"/>			
	Yes <input type="checkbox"/> No <input type="checkbox"/>			
	Yes <input type="checkbox"/> No <input type="checkbox"/>			

REMARKS: Bucky Moore@TetraTech.com  
24 Hk Rusk  
Samples taken & brought directly to lab.

**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 126351

**CONDITIONS**

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 126351
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
jharimon	When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141	11/10/2022