

SITE INFORMATION

Report Type: Closure Report (1RP-4471)

General Site Information:

Site:	Endurance 36 State Com 701/704					
Company:	EOG Resources					
Section, Township and Range	Unit L4	Sec. 36	T 26S	R 33E		
County:	Lea County, NM					
GPS:	32.00143			-103.432097		
Surface Owner:	State of New Mexico					

Release Data:

Date Released:	10/16/2016
Type Release:	Produced Water
Source of Contamination:	Produced Water Tank Ruptured
Fluid Released:	2980 bbls. PW
Fluids Recovered:	2660 bbls. PW

Official Communication:

Name:	James Kennedy		Clair Gonzales
Company:	EOG Resources		Tetra Tech
Address:	5509 Champions Dr		901 West Wall Street
			Suite 100
City:	Midland, TX 79706		Midland, Texas 79701
Phone number:	432-686-7016		432-687-8634
Fax:			
Email:	James.Kennedy@eogresources.com		clair.gonzales@tetrattech.com

Site Characterization

Depth to Groundwater:	76.06' below ground surface (bgs)
Karst Potential:	Low

Recommended Remedial Action Levels (RRALs)

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



March 22, 2021

Bradford Billings
Hydrologist
District 2 Artesia
Oil Conservation Division
Santa Fe, NM 87505

**Re: Closure Report
EOG Resources
Endurance 36 State Com 701/704
Unit L4, Section 36, Township 26 South, Range 33 East
Lea County, New Mexico
1RP-4471**

Mr. Billings:

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources (EOG) to assess a release at the EOG Endurance 36 State Com 701/704 (API No. 30-025-42984). The release footprint is located in the Public Land Survey System (PLSS) Unit L4, Section 36, Township 26 South, Range 33 East, Eddy County, New Mexico (Site). The Site coordinates are 32.00143°, -103.432097°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the release occurred on October 16, 2016 due to a rupture of the produced water tank. The release consisted of 2,980 barrels (bbls.) of produced water affecting the area inside the containment, onto the pad and off the pad to the west side. The release stayed within 20 feet (ft.) of the pad and did not migrate far into the pasture or dry creeks. During immediate response actions, a vacuum truck recovered 2,660 bbls. of produced water. The initial C-141 report was submitted on October 18, 2016 and approved by the NMOCD on October 20, 2016. The release was subsequently assigned the Remediation Permit (RP) number 1RP-4471. The 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, 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 Database website in Section 27, approximately 2.03 miles Northwest of the site, and has a reported depth to groundwater of 76.06 feet below ground surface. In addition, according to the New Mexico Office of the State Engineer, there are no water wells within 800 meters (½ miles) radius. However, there are three (3) water wells are located within 4,000 meters (approximately 2 ½ mile) of the Site. The average depth to groundwater is 117 ft. bgs. Site characterization data is included in Appendix B.

Tetra Tech

901 West Wall Street, Suite 100, Midland, TX 79701

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com



Regulatory

A risk-based evaluation was performed for the site per 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 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 on the site characterization, the proposed RRAL for TPH is 2,500 mg/kg (GRO+DRO+MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 10,000 mg/kg.

Soil Assessment and Analytical Results

On March 4, 2021, Tetra Tech personnel were on site to evaluate and sample the release area. The formerly impacted area was identified from the description in the C-141 and the aerial imagery. Soils were field screened for salinity using an Extech EC400 ExStik to determine sampling intervals. A total of four (4) auger holes (AH-1 through AH-4) were advanced to a total depth from surface to 2ft. bgs. A total of eight (8) samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The results of the sampling are summarized in Table 1. The auger hole locations are shown on Figure 3. Photographic documentation is included.

Referring to Table 1, none of the samples analyzed exceeded the Site RRAL for chloride (10,000 mg/kg), TPH (2,500 mg/kg), BTEX (50 m/kg) and benzene (10 mg/kg). In addition, all the samples were also below the 600 mg/kg chloride and 100 mg/kg TPH reclamation standards.

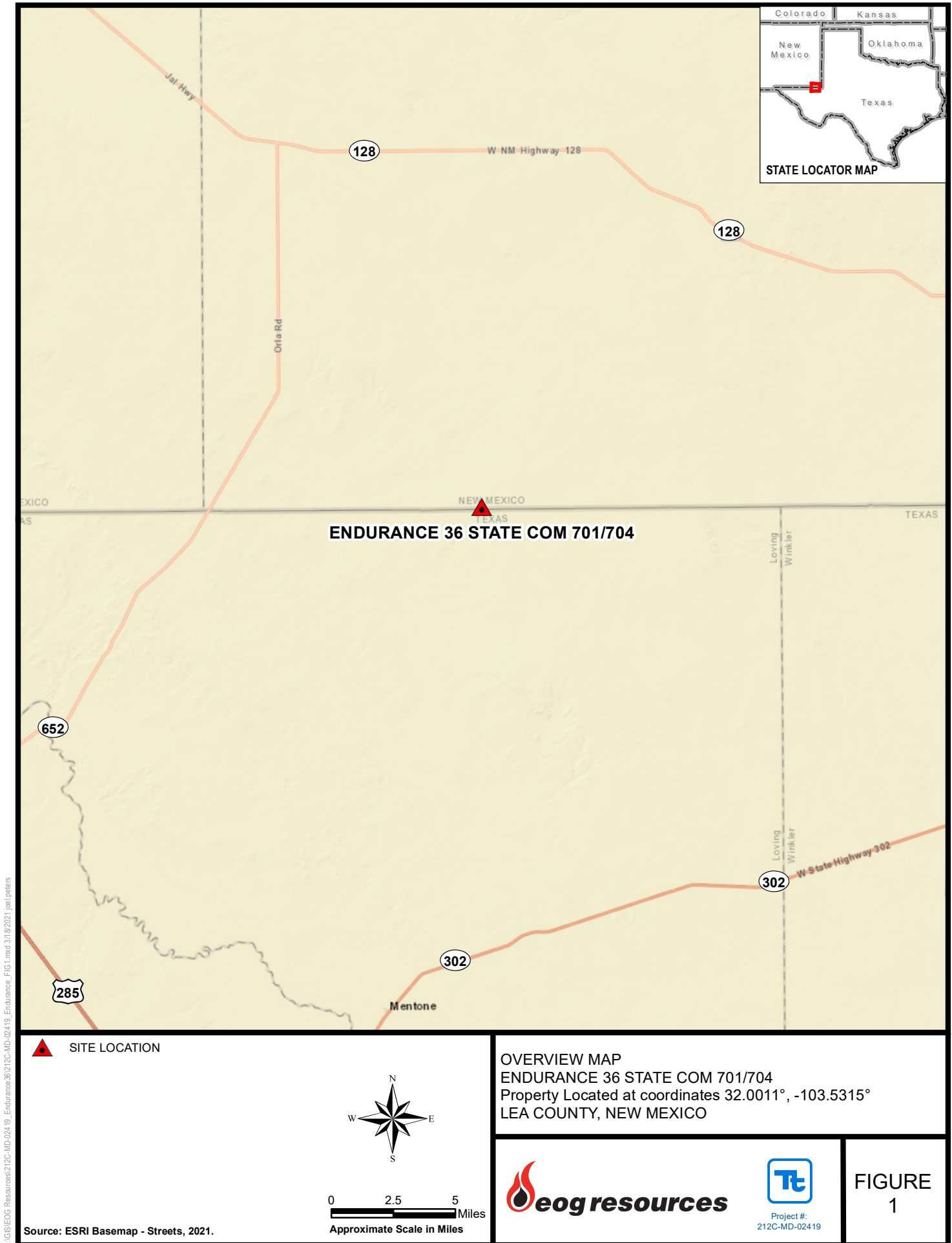
Conclusion

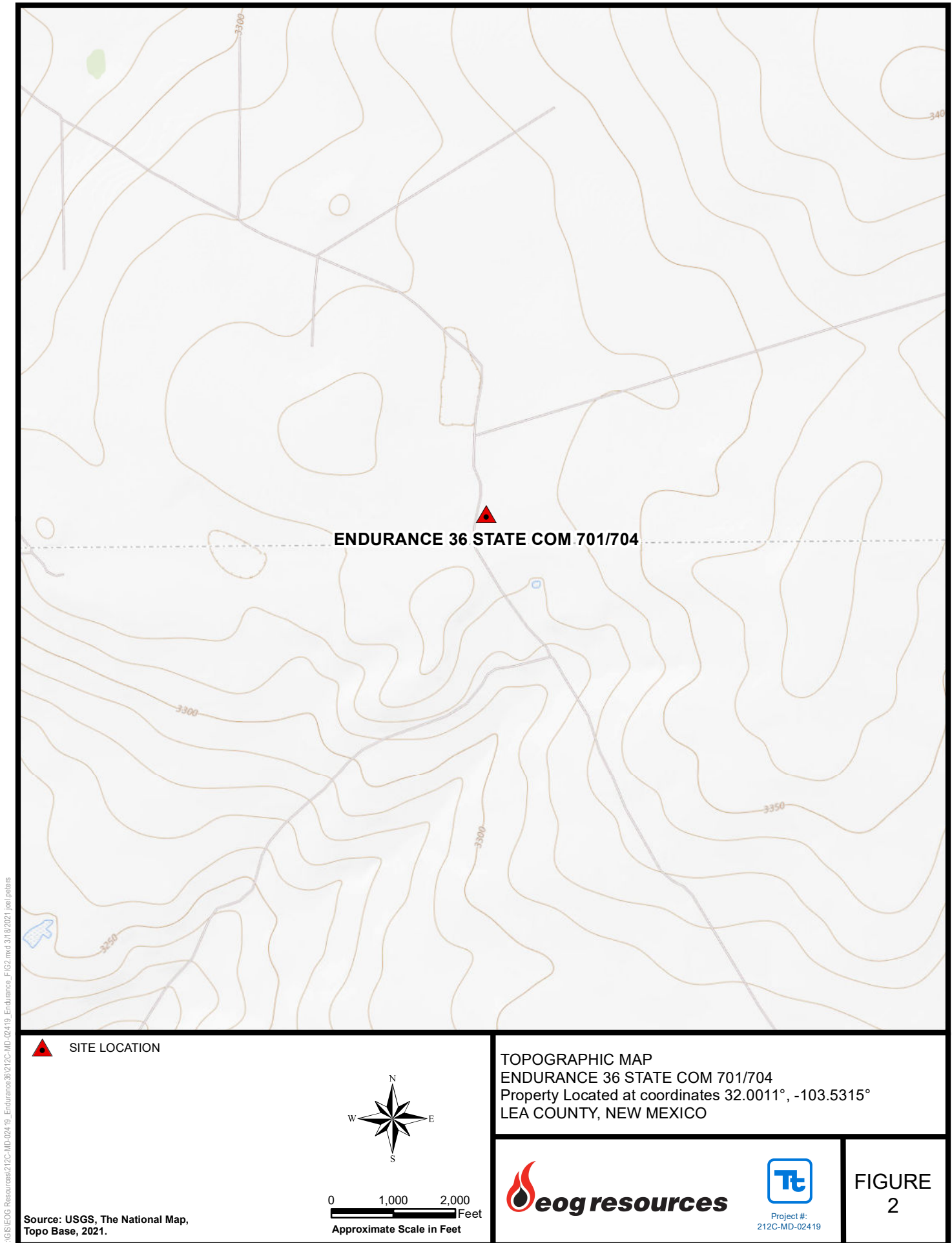
Based on the laboratory results and remediation activities performed, EOG requests closure of this spill issue. The final C-141 initial reports are enclosed in Appendix A. If you have any questions or comments concerning the assessment or remediation activities for this site, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

Paula Tocora Alonso
Paula Tocora Alonso
Environmental Engineer I
Tetra Tech, Inc

Figures

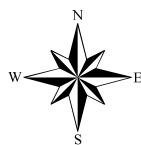






AUGER HOLE SAMPLE LOCATIONS	LATITUDE	LONGITUDE
AH-1	32.001665°	-103.53211°
AH-2	32.00152°	-103.532022°
AH-3	32.00136°	-103.5321°
AH-4	32.001191°	-103.532014°

● AUGER HOLE SAMPLE LOCATION



0 50 100 Feet
Approximate Scale in Feet

RELEASE ASSESSMENT MAP AND BORING LOCATIONS
ENDURANCE 36 STATE COM 701/704
Property Located at coordinates 32.0011°, -103.5315°
LEA COUNTY, NEW MEXICO



Project #:
212C-MD-02419

FIGURE
3

Source: ESRI Basemap - Imagery 2019.

Tables

Table 1
EOG
Endurance 36 State Fed Com #701/704
Lea County, NM

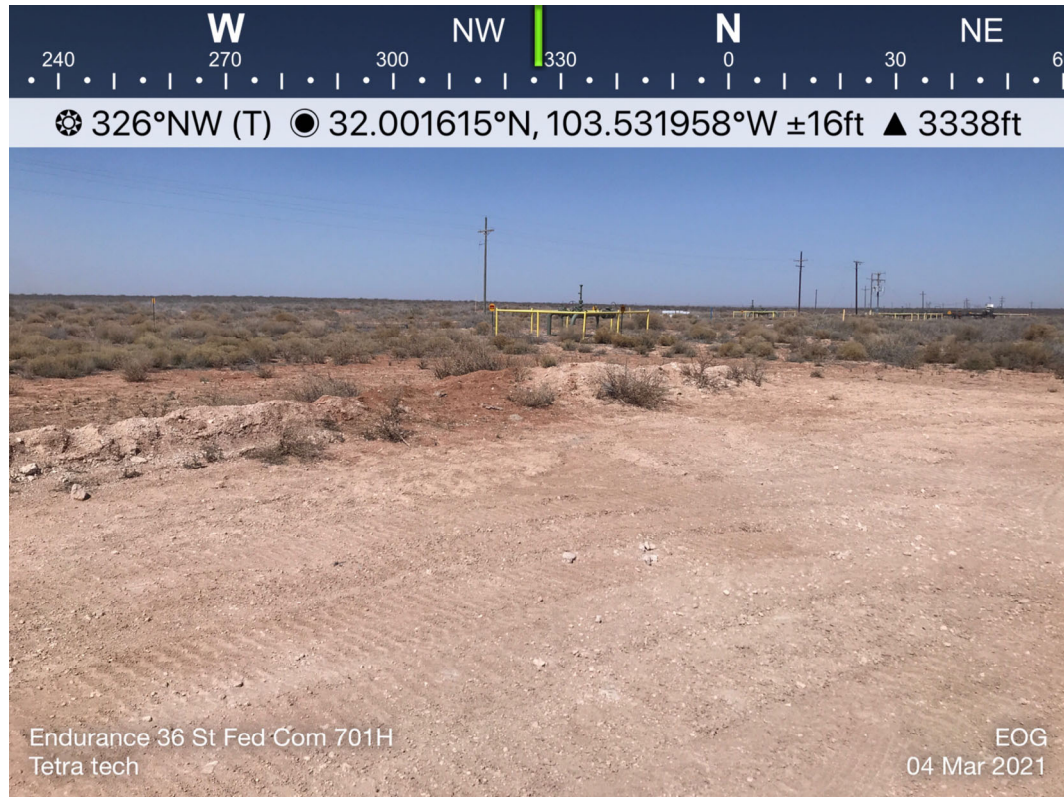
Sample ID	Sample Date	Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chlorides
			In-Situ	Removed (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	Total (mg/kg)						
AH-1	3/4/2021	0-1'	X	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	6.92
	3/4/2021	1.5'-2	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	7.73
AH-2	3/4/2021	0-1'	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	17.7
	3/4/2021	1.5'-2	X	-	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	49
AH-3	3/4/2021	0-1'	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	7.19
	3/4/2021	1.5'-2	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	6.34
AH-4	3/4/2021	0-1'	X	-	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	8.81
	3/4/2021	1.5'-2	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	7.76

(-)

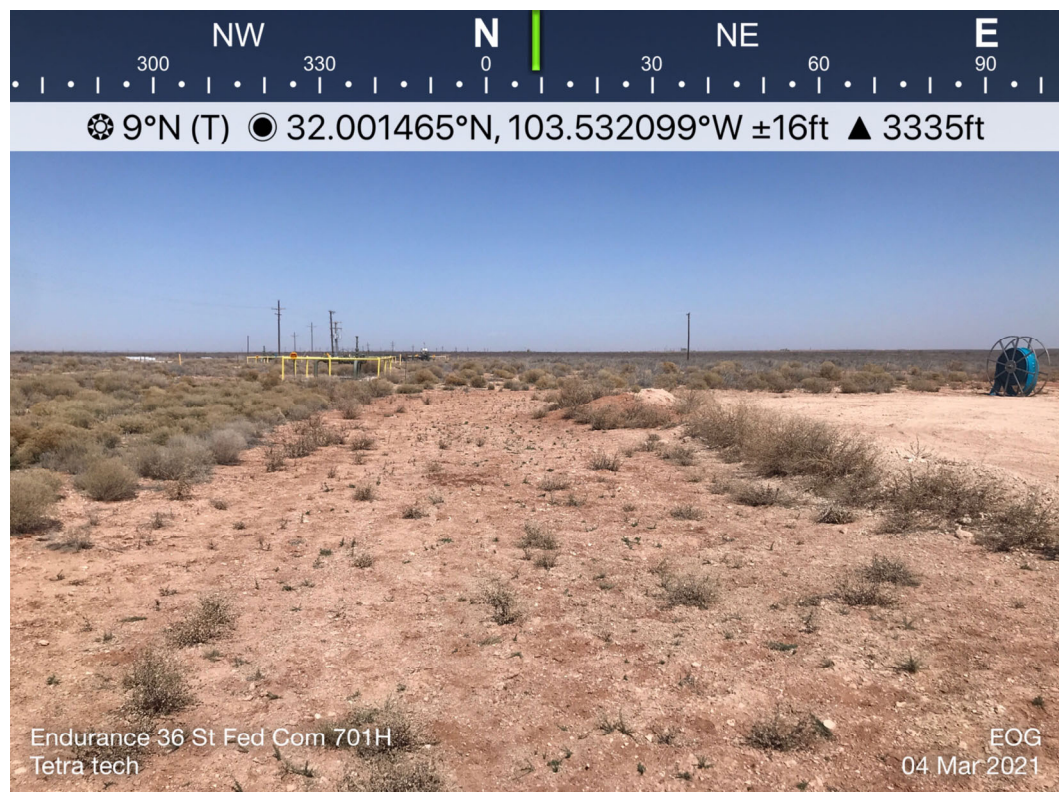
Not Analyzed
Exceeded RRALs

Photos

EOG Resources
Endurance 36 State Com 701/704
Lea County, New Mexico



View of Release Area – View Northwest

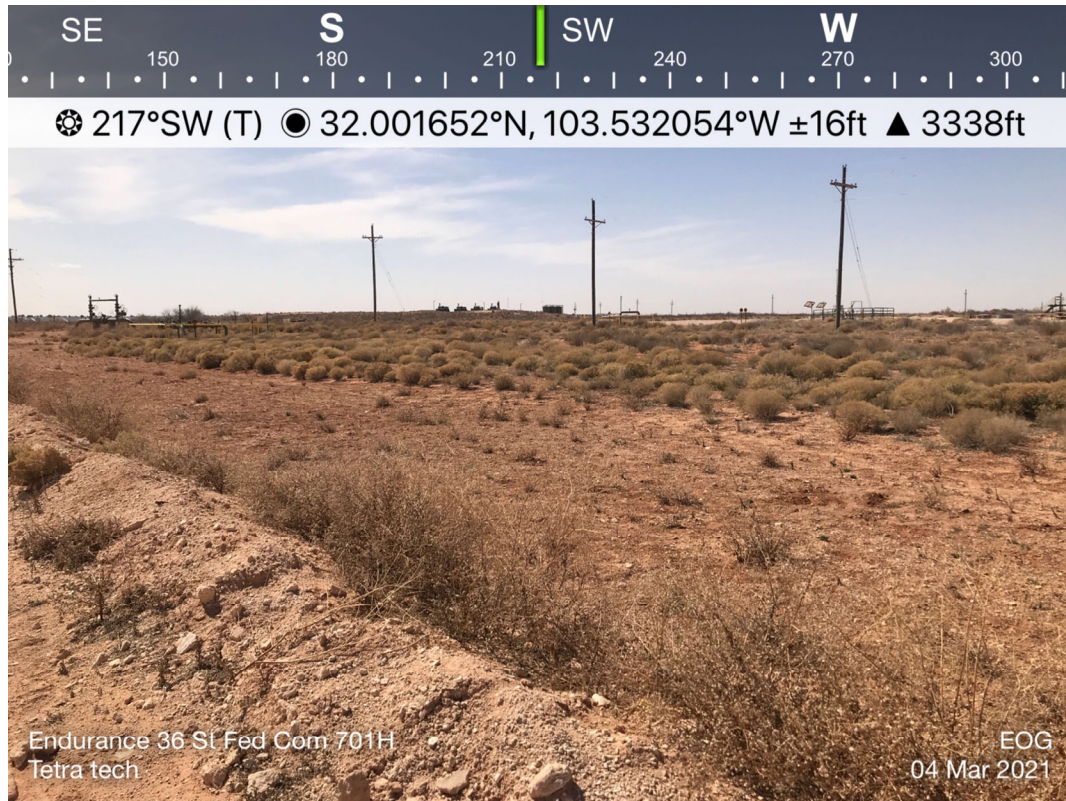


View of Release Area – View North

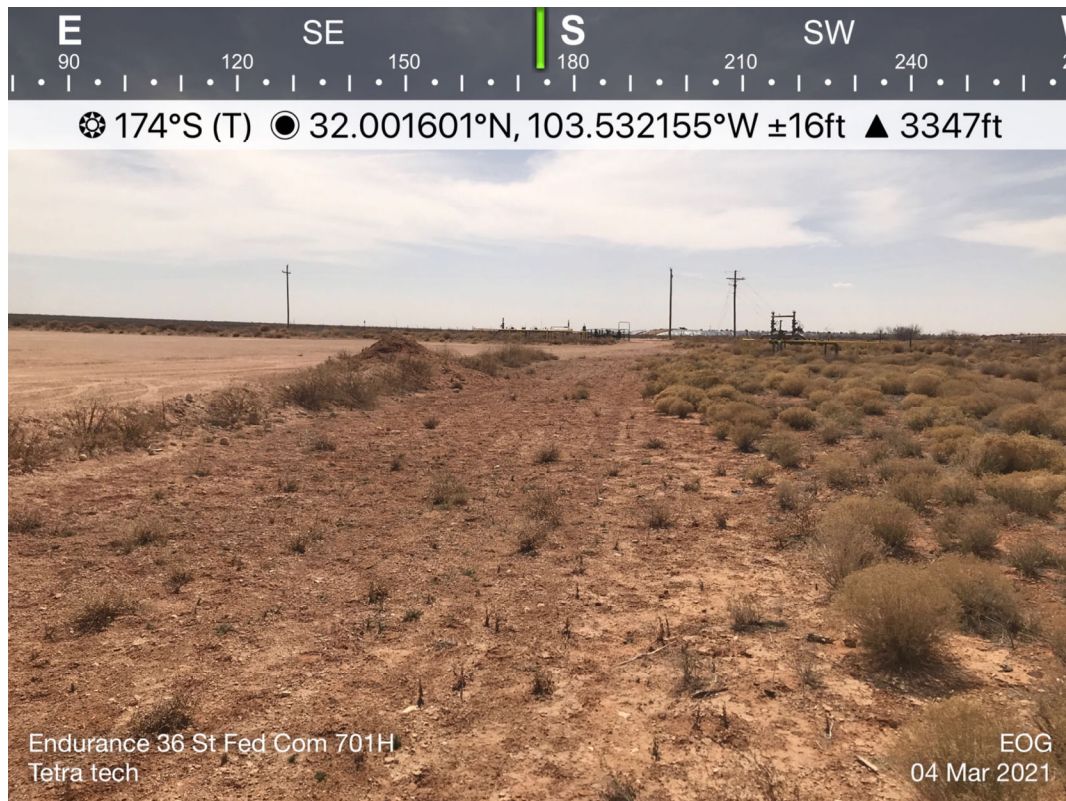
EOG Resources
Endurance 36 State Com 701/704
Lea County, New Mexico



TETRA TECH



View of Release Area – View South



View of Release Area – View Southeast

Appendix A

REVIEWED

By Kristen Lynch at 12:09 pm, Oct 20, 2016

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action**OPERATOR**
☒ Initial Report ☐ Final Report

Name of Company - EOG Resources, Inc.	Contact Zane Kurtz
Address 5509 Champions Drive, Midland, TX 79706	Telephone No. 432-425-2023
Facility Name Endurance 36 State Com 701/704	Facility Type oil well
Surface Owner NM State Lands	Mineral Owner EOG
API No. 30-025-42984	

LOCATION OF RELEASE

Unit Letter	Section 36	Township 26S	Range 33E	Feet from the 360	North/South Line South	Feet from the 1020	East/West Line West	County Lea
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Latitude 32.0011 Longitude -103.5315

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 2980 bbls	Volume Recovered 2660 bbls
Source of Release 6500 bbl water holding tank	Date and Hour of Occurrence 10-16-2016	Date and Hour of Discovery 0700
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

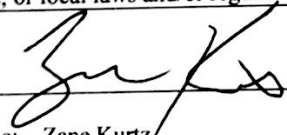
If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.*

6500 bbls produced water holding tank ruptured and spilled 2980 bbls into a small containment and onto the pad and off the pad on the west side. It stayed within 20 feet of the pad and did not migrate far into the pasture or dry creeks. We were able to recover about 2660 bbls with vac trucks. One call was made and consultant went out to delineate vertical and horizontal impacts. A work plan will be prepared to remediate impacted soil.

Describe Area Affected and Cleanup Action Taken.*

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Zane Kurtz	Approved by Environmental Specialist: 	
Title: Sr. Environmental Rep.	Approval Date: 10/20/2016	Expiration Date: 12/20/2016
E-mail Address: zane_kurtz@eogresources.com	NMOCD Accepts Discrete Samples Only	
Date: 10-18-2016 Phone: 423-425-2023	Conditions of Approval: Notify NMOCD Prior to Sampling Please submit remediation plan no later than 11/20/2016	Attached ☐ 1RP 4471

* Attach Additional Sheets If Necessary

nKL1629443451
pKL1629443643

Scanned by CamScanner

Incident ID	
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?	☐ 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

Page 4

Incident ID	
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: _____ Title: _____

Signature: James F. Kennedy Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
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: James F. Kennedy Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

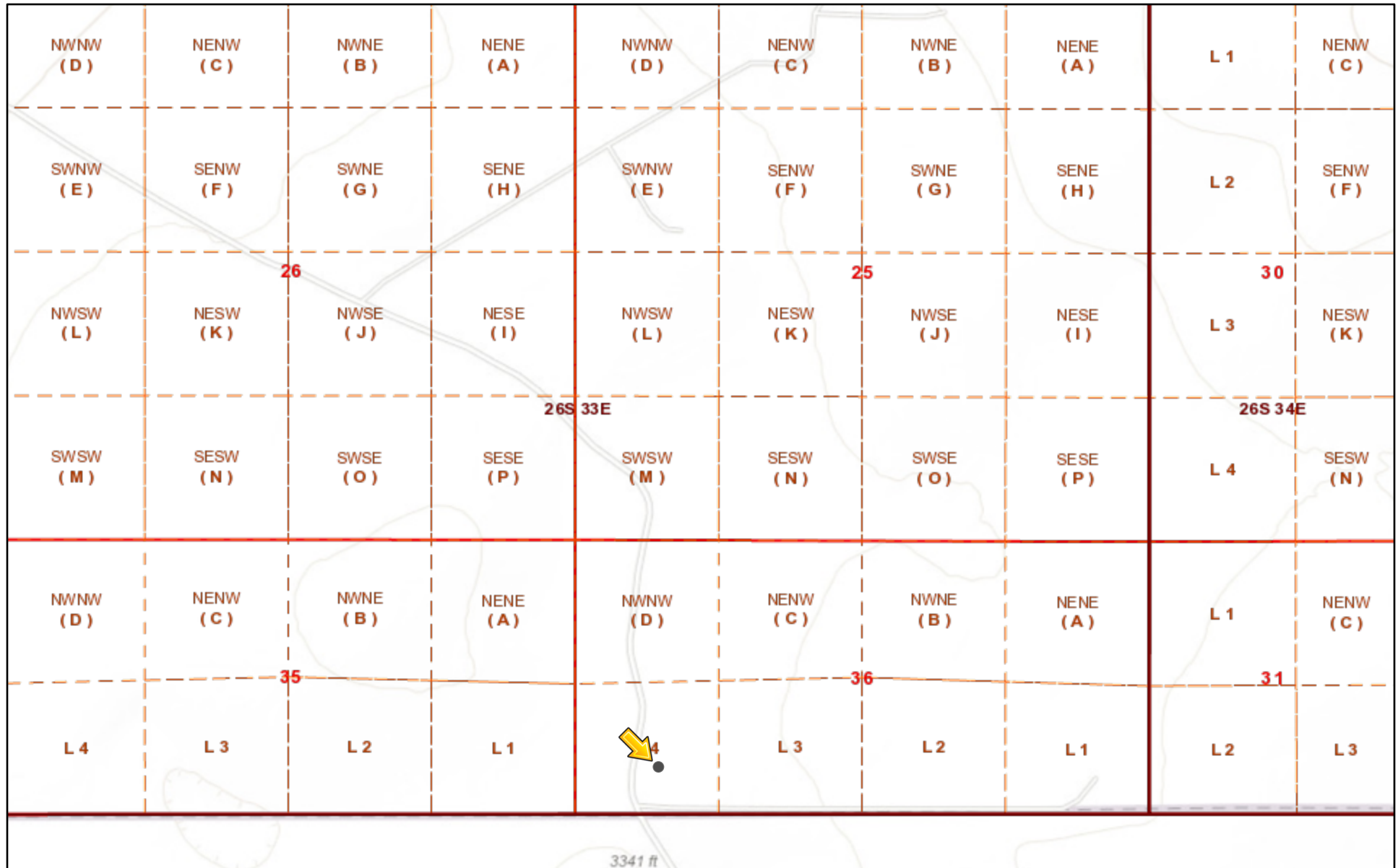
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Appendix B

1RP-4471



3/17/2021, 5:11:18 PM



Override 1



PLSS Second Division



PLJV Probable Playas



OCD District Offices



PLSS Townships



OSE Water-bodies

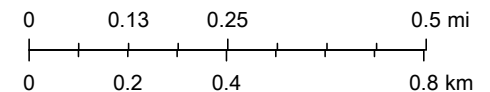


PLSS First Division



OSE Streams

1:18,056



Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin,

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. <http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75>: New Mexico Oil Conservation Division

Karst Potential

1RP-4471

Legend

-  Endurance 36 State Com 701/704
-  High
-  Low
-  Medium

 Endurance 36 State Com 701/704

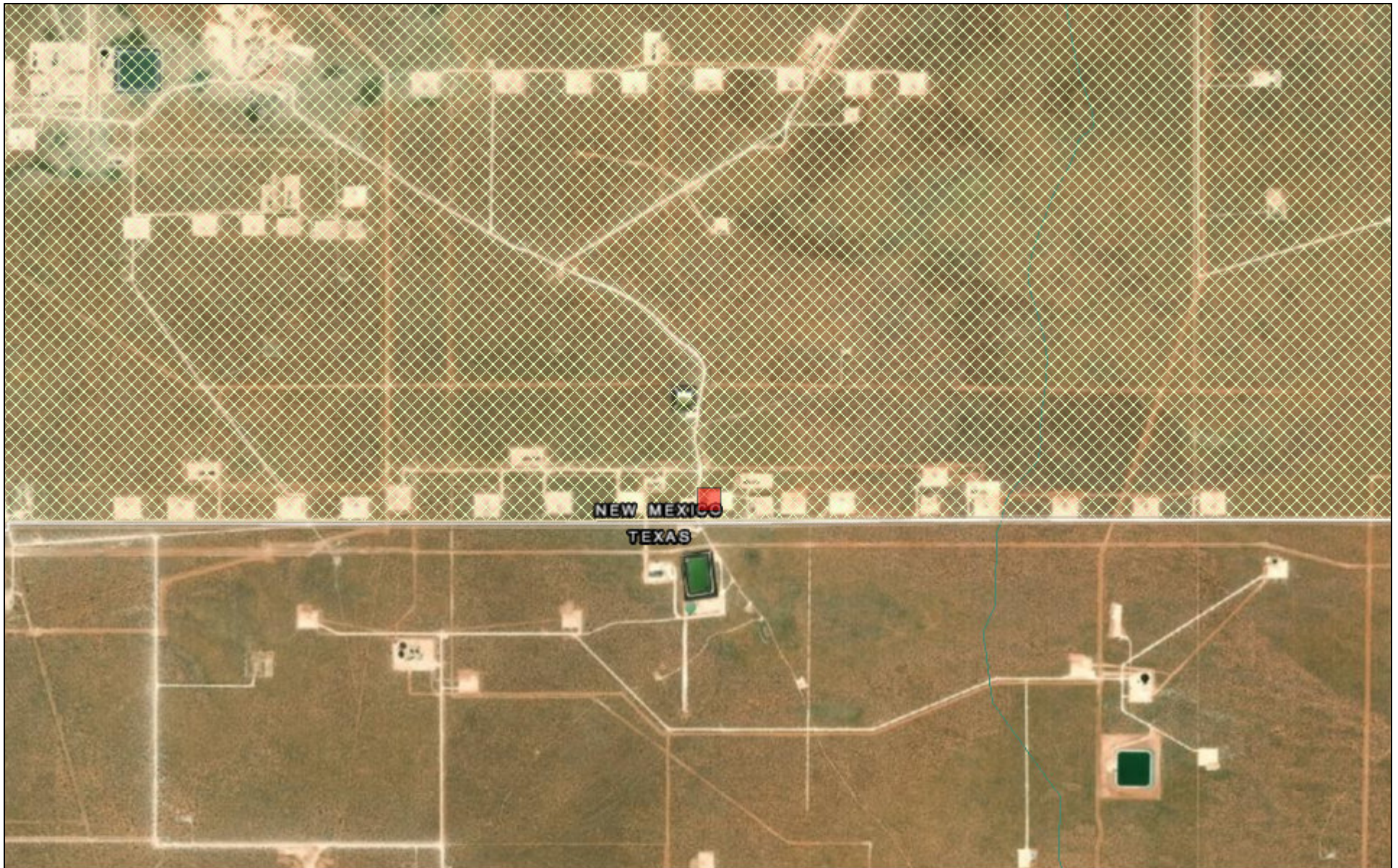


Google Earth

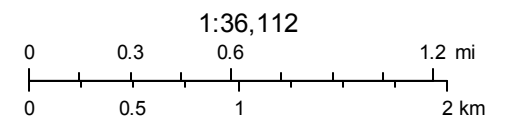


5 mi

New Mexico NFHL Data



March 17, 2021



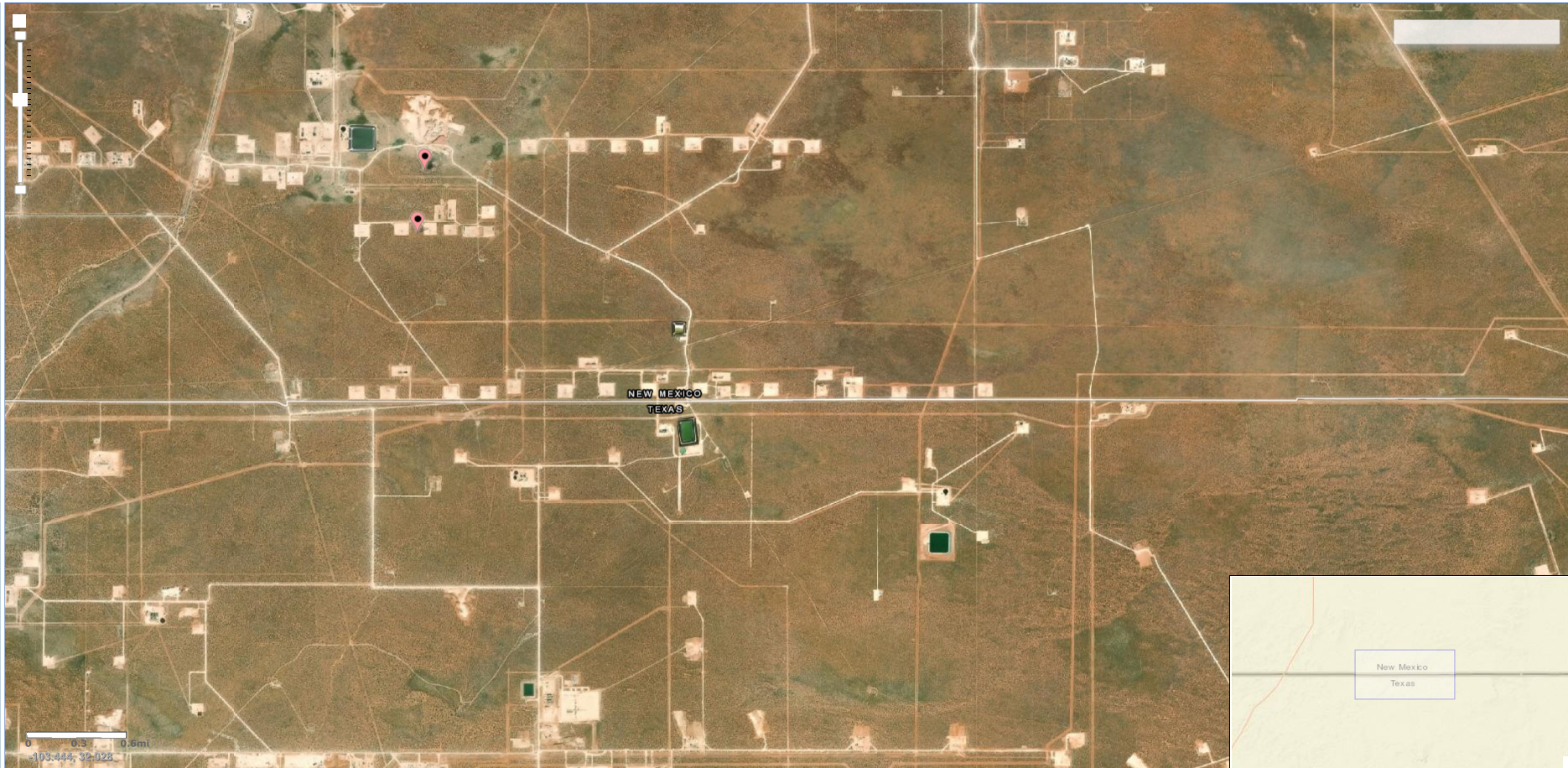
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



National Water Information System: Mapper

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Site Information

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- [Full News](#) 

Groundwater levels for New Mexico

Click to hide state-specific text

* IMPORTANT: [Next Generation Station Page](#)

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 320059103333501

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

USGS 320059103333501 26S.33E.27.21112

Lea County, New Mexico
Latitude 32°01'16.0", Longitude 103°33'33.9" NAD83
Land-surface elevation 3,252.00 feet above NGVD29
The depth of the well is 200 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
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											

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1954-07-26			D	62610	3172.29	NGVD29		1	Z		A
1954-07-26			D	62611	3173.87	NAVD88		1	Z		A
1954-07-26			D	72019	79.71			1	Z		A
1976-01-08			D	62610	3175.48	NGVD29		1	Z		A
1976-01-08			D	62611	3177.06	NAVD88		1	Z		A
1976-01-08			D	72019	76.52			1	Z		A
1986-03-04			D	62610	3174.86	NGVD29		1	Z		A
1986-03-04			D	62611	3176.44	NAVD88		1	Z		A
1986-03-04			D	72019	77.14			1	Z		A
1990-11-27			D	62610	3175.46	NGVD29		1	Z		A
1990-11-27			D	62611	3177.04	NAVD88		1	Z		A
1990-11-27			D	72019	76.54			1	Z		A
1996-03-05			D	62610	3174.61	NGVD29		1	S		A
1996-03-05			D	62611	3176.19	NAVD88		1	S		A
1996-03-05			D	72019	77.39			1	S		A

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
2001-02-27			D	62610	3175.40	NGVD29		1	S		A
2001-02-27			D	62611	3176.98	NAVD88		1	S		A
2001-02-27			D	72019	76.60			1	S		A

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

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[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)
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: 2021-03-18 15:50:55 EDT
0.34 0.32 nadww01





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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

Average Depth to Water: **117 feet**
Minimum Depth: **110 feet**
Maximum Depth: **125 feet**

UTMNAD83 Radius Search (in meters):

Northing (Y): 3541535.34

Radius: 4000

3/17/21 4:22 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Appendix C

Certificate of Analysis Summary 690619

Tetra Tech- Midland, Midland, TX

Project Name: Endurance

Project Id: 212C-MD-02419 TASK:2100

Contact: Clair Gonzales

Project Location: Lea County, NM

Date Received in Lab: Fri 03.05.2021 12:41

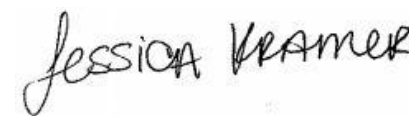
Report Date: 03.15.2021 15:46

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	690619-001	690619-002	690619-003	690619-004	690619-005	690619-006
	<i>Field Id:</i>	AH-1 (0-1')	AH-1 (1.5'-2')	AH-2 (0-1')	AH-2 (1.5'-2')	AH-3 (0-1')	AH-3 (1.5'-2')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	03.04.2021 00:00	03.04.2021 00:00	03.04.2021 00:00	03.04.2021 00:00	03.04.2021 00:00	03.04.2021 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	03.11.2021 16:00	03.11.2021 16:00	03.11.2021 16:00	03.11.2021 16:00	03.12.2021 12:00	03.12.2021 12:00
	<i>Analyzed:</i>	03.12.2021 16:26	03.12.2021 16:47	03.12.2021 17:07	03.12.2021 17:28	03.12.2021 20:59	03.12.2021 21:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00397 0.00397	<0.00403 0.00403	<0.00400 0.00400	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	03.06.2021 15:00	03.06.2021 15:00	03.06.2021 15:00	03.06.2021 15:00	03.06.2021 15:00	03.06.2021 15:00
	<i>Analyzed:</i>	03.06.2021 18:32	03.06.2021 18:37	03.06.2021 18:52	03.06.2021 18:57	03.06.2021 19:12	03.06.2021 19:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		6.92 5.00	7.73 4.99	17.7 4.97	49.0 4.95	7.19 5.02	6.34 5.01
TPH By SW8015 Mod	<i>Extracted:</i>	03.05.2021 13:00	03.05.2021 13:00	03.05.2021 13:00	03.05.2021 13:00	03.05.2021 13:00	03.05.2021 13:00
	<i>Analyzed:</i>	03.05.2021 19:39	03.05.2021 20:00	03.05.2021 20:21	03.05.2021 20:43	03.05.2021 21:05	03.05.2021 21:26
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH		<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0

BRL - Below Reporting Limit

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



Certificate of Analysis Summary 690619

Tetra Tech- Midland, Midland, TX

Project Name: Endurance

Project Id: 212C-MD-02419 TASK:2100

Contact: Clair Gonzales

Project Location: Lea County, NM

Date Received in Lab: Fri 03.05.2021 12:41

Report Date: 03.15.2021 15:46

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	690619-007	690619-008				
	Field Id:	AH-4 (0-1')	AH-4 (1.5'-2')				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	03.04.2021 00:00	03.04.2021 00:00				
BTEX by EPA 8021B	Extracted:	03.12.2021 12:00	03.12.2021 12:00				
	Analyzed:	03.12.2021 21:40	03.12.2021 22:00				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00202 0.00202	<0.00200 0.00200				
Toluene		<0.00202 0.00202	<0.00200 0.00200				
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200				
m,p-Xylenes		<0.00403 0.00403	<0.00401 0.00401				
o-Xylene		<0.00202 0.00202	<0.00200 0.00200				
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200				
Total BTEX		<0.00202 0.00202	<0.00200 0.00200				
Inorganic Anions by EPA 300/300.1	Extracted:	03.06.2021 15:00	03.06.2021 15:00				
	Analyzed:	03.06.2021 19:22	03.06.2021 19:27				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		8.81 5.01	7.76 5.01				
TPH By SW8015 Mod	Extracted:	03.05.2021 13:00	03.05.2021 13:00				
	Analyzed:	03.05.2021 21:48	03.05.2021 20:43				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9				
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9				
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9				
Total TPH		<50.0 50.0	<49.9 49.9				

BRL - Below Reporting Limit

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



Analytical Report 690619

for

Tetra Tech- Midland

Project Manager: Clair Gonzales

Endurance

212C-MD-02419 TASK:2100

03.15.2021

Collected By: Client



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

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

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

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



03.15.2021

Project Manager: **Clair Gonzales**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **690619**

Endurance

Project Address: Lea County, NM

Clair Gonzales:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 690619. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 690619 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 690619****Tetra Tech- Midland, Midland, TX**

Endurance

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 (0-1')	S	03.04.2021 00:00		690619-001
AH-1 (1.5'-2')	S	03.04.2021 00:00		690619-002
AH-2 (0-1')	S	03.04.2021 00:00		690619-003
AH-2 (1.5'-2')	S	03.04.2021 00:00		690619-004
AH-3 (0-1')	S	03.04.2021 00:00		690619-005
AH-3 (1.5'-2')	S	03.04.2021 00:00		690619-006
AH-4 (0-1')	S	03.04.2021 00:00		690619-007
AH-4 (1.5'-2')	S	03.04.2021 00:00		690619-008



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Endurance

Project ID: 212C-MD-02419 TASK:
Work Order Number(s): 690619

Report Date: 03.15.2021
Date Received: 03.05.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3152838 TPH By SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7722735-1-BLK.



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-1 (0-1')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-001

Date Collected: 03.04.2021 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 03.06.2021 15:00

% Moisture:

Seq Number: 3152766

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.92	5.00	mg/kg	03.06.2021 18:32		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 03.05.2021 13:00

% Moisture:

Seq Number: 3152840

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.05.2021 19:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.05.2021 19:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.05.2021 19:39	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.05.2021 19:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	83	%	70-130	03.05.2021 19:39		
o-Terphenyl	84-15-1	74	%	70-130	03.05.2021 19:39		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX Endurance

Sample Id: **AH-1 (0-1')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-001

Date Collected: 03.04.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.11.2021 16:00

% Moisture:

Seq Number: 3153406

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.12.2021 16:26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.12.2021 16:26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.12.2021 16:26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.12.2021 16:26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.12.2021 16:26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.12.2021 16:26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.12.2021 16:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	03.12.2021 16:26		
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.12.2021 16:26		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-1 (1.5'-2')** Matrix: Soil Date Received: 03.05.2021 12:41
 Lab Sample Id: 690619-002 Date Collected: 03.04.2021 00:00
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: SPC
 Analyst: SPC Date Prep: 03.06.2021 15:00 % Moisture:
 Seq Number: 3152766 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.73	4.99	mg/kg	03.06.2021 18:37		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 03.05.2021 13:00 % Moisture:
 Seq Number: 3152840 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.05.2021 20:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.05.2021 20:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.05.2021 20:00	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.05.2021 20:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	84	%	70-130	03.05.2021 20:00		
o-Terphenyl	84-15-1	76	%	70-130	03.05.2021 20:00		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-1 (1.5'-2')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-002

Date Collected: 03.04.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.11.2021 16:00

% Moisture:

Seq Number: 3153406

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.12.2021 16:47	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.12.2021 16:47	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.12.2021 16:47	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.12.2021 16:47	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.12.2021 16:47	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.12.2021 16:47	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.12.2021 16:47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.12.2021 16:47		
4-Bromofluorobenzene	460-00-4	107	%	70-130	03.12.2021 16:47		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-2 (0-1')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-003

Date Collected: 03.04.2021 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 03.06.2021 15:00

% Moisture:

Seq Number: 3152766

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.7	4.97	mg/kg	03.06.2021 18:52		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 03.05.2021 13:00

% Moisture:

Seq Number: 3152840

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.05.2021 20:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.05.2021 20:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.05.2021 20:21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.05.2021 20:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	03.05.2021 20:21	
o-Terphenyl	84-15-1	80	%	70-130	03.05.2021 20:21	



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-2 (0-1')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-003

Date Collected: 03.04.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.11.2021 16:00

% Moisture:

Seq Number: 3153406

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.12.2021 17:07	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.12.2021 17:07	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.12.2021 17:07	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.12.2021 17:07	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.12.2021 17:07	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.12.2021 17:07	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.12.2021 17:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	03.12.2021 17:07		
1,4-Difluorobenzene	540-36-3	105	%	70-130	03.12.2021 17:07		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-2 (1.5'-2')** Matrix: Soil Date Received: 03.05.2021 12:41
 Lab Sample Id: 690619-004 Date Collected: 03.04.2021 00:00
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: SPC
 Analyst: SPC Date Prep: 03.06.2021 15:00 % Moisture:
 Seq Number: 3152766 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	49.0	4.95	mg/kg	03.06.2021 18:57		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 03.05.2021 13:00 % Moisture:
 Seq Number: 3152840 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.05.2021 20:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.05.2021 20:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.05.2021 20:43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.05.2021 20:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-130	03.05.2021 20:43	
o-Terphenyl	84-15-1	78	%	70-130	03.05.2021 20:43	



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-2 (1.5'-2')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-004

Date Collected: 03.04.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.11.2021 16:00

% Moisture:

Seq Number: 3153406

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.12.2021 17:28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.12.2021 17:28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.12.2021 17:28	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.12.2021 17:28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.12.2021 17:28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.12.2021 17:28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.12.2021 17:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.12.2021 17:28		
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.12.2021 17:28		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-3 (0-1')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-005

Date Collected: 03.04.2021 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 03.06.2021 15:00

% Moisture:

Seq Number: 3152766

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.19	5.02	mg/kg	03.06.2021 19:12		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 03.05.2021 13:00

% Moisture:

Seq Number: 3152840

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.05.2021 21:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.05.2021 21:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.05.2021 21:05	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.05.2021 21:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	03.05.2021 21:05	
o-Terphenyl	84-15-1	77	%	70-130	03.05.2021 21:05	



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-3 (0-1')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-005

Date Collected: 03.04.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.12.2021 12:00

% Moisture:

Seq Number: 3153519

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.12.2021 20:59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.12.2021 20:59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.12.2021 20:59	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.12.2021 20:59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.12.2021 20:59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.12.2021 20:59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.12.2021 20:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	03.12.2021 20:59		
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.12.2021 20:59		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-3 (1.5'-2')** Matrix: Soil Date Received: 03.05.2021 12:41
 Lab Sample Id: 690619-006 Date Collected: 03.04.2021 00:00
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: SPC
 Analyst: SPC Date Prep: 03.06.2021 15:00 % Moisture:
 Seq Number: 3152766 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.34	5.01	mg/kg	03.06.2021 19:17		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 03.05.2021 13:00 % Moisture:
 Seq Number: 3152840 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.05.2021 21:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.05.2021 21:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.05.2021 21:26	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.05.2021 21:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-130	03.05.2021 21:26	
o-Terphenyl	84-15-1	78	%	70-130	03.05.2021 21:26	



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-3 (1.5'-2')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-006

Date Collected: 03.04.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.12.2021 12:00

% Moisture:

Seq Number: 3153519

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.12.2021 21:20	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.12.2021 21:20	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.12.2021 21:20	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.12.2021 21:20	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.12.2021 21:20	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.12.2021 21:20	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.12.2021 21:20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	03.12.2021 21:20		
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.12.2021 21:20		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-4 (0-1')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-007

Date Collected: 03.04.2021 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: SPC

Analyst: SPC

Date Prep: 03.06.2021 15:00

% Moisture:

Seq Number: 3152766

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.81	5.01	mg/kg	03.06.2021 19:22		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 03.05.2021 13:00

% Moisture:

Seq Number: 3152840

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.05.2021 21:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.05.2021 21:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.05.2021 21:48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.05.2021 21:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-130	03.05.2021 21:48	
o-Terphenyl	84-15-1	83	%	70-130	03.05.2021 21:48	



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX Endurance

Sample Id: **AH-4 (0-1')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-007

Date Collected: 03.04.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.12.2021 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3153519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.12.2021 21:40	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.12.2021 21:40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.12.2021 21:40	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.12.2021 21:40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.12.2021 21:40	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.12.2021 21:40	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.12.2021 21:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	03.12.2021 21:40		
4-Bromofluorobenzene	460-00-4	98	%	70-130	03.12.2021 21:40		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-4 (1.5'-2')** Matrix: Soil Date Received: 03.05.2021 12:41
 Lab Sample Id: 690619-008 Date Collected: 03.04.2021 00:00
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Tech: SPC
 Analyst: SPC Date Prep: 03.06.2021 15:00 % Moisture:
 Seq Number: 3152766 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.76	5.01	mg/kg	03.06.2021 19:27		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 03.05.2021 13:00 % Moisture:
 Seq Number: 3152838 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.05.2021 20:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.05.2021 20:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.05.2021 20:43	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.05.2021 20:43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	83	%	70-130	03.05.2021 20:43		
o-Terphenyl	84-15-1	79	%	70-130	03.05.2021 20:43		



Certificate of Analytical Results 690619

Tetra Tech- Midland, Midland, TX

Endurance

Sample Id: **AH-4 (1.5'-2')**

Matrix: Soil

Date Received: 03.05.2021 12:41

Lab Sample Id: 690619-008

Date Collected: 03.04.2021 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 03.12.2021 12:00

% Moisture:

Seq Number: 3153519

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.12.2021 22:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.12.2021 22:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.12.2021 22:00	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.12.2021 22:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.12.2021 22:00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.12.2021 22:00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.12.2021 22:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	03.12.2021 22:00		
1,4-Difluorobenzene	540-36-3	96	%	70-130	03.12.2021 22:00		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Tetra Tech- Midland Endurance

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3152766

Matrix: Solid

Prep Method: E300P

Date Prep: 03.06.2021

MB Sample Id: 7722686-1-BLK

LCS Sample Id: 7722686-1-BKS

LCSD Sample Id: 7722686-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	254	102	254	102	90-110	0	20	mg/kg	03.06.2021 17:17	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3152766

Matrix: Soil

Prep Method: E300P

Date Prep: 03.06.2021

Parent Sample Id: 690617-008

MS Sample Id: 690617-008 S

MSD Sample Id: 690617-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.9	251	264	100	263	99	90-110	0	20	mg/kg	03.06.2021 17:32	

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3152766

Matrix: Soil

Prep Method: E300P

Date Prep: 03.06.2021

Parent Sample Id: 690619-002

MS Sample Id: 690619-002 S

MSD Sample Id: 690619-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.73	250	256	99	256	99	90-110	0	20	mg/kg	03.06.2021 18:42	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3152838

Matrix: Solid

Prep Method: SW8015P

Date Prep: 03.05.2021

MB Sample Id: 7722735-1-BLK

LCS Sample Id: 7722735-1-BKS

LCSD Sample Id: 7722735-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	845	85	855	86	70-130	1	20	mg/kg	03.05.2021 13:08	
Diesel Range Organics (DRO)	<50.0	1000	1000	100	1000	100	70-130	0	20	mg/kg	03.05.2021 13:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	67	**	75		75		70-130	%	03.05.2021 13:08
o-Terphenyl	70		71		71		70-130	%	03.05.2021 13:08

Analytical Method: TPH By SW8015 Mod

Seq Number: 3152840

Matrix: Solid

Prep Method: SW8015P

Date Prep: 03.05.2021

MB Sample Id: 7722738-1-BLK

LCS Sample Id: 7722738-1-BKS

LCSD Sample Id: 7722738-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1020	102	1010	101	70-130	1	20	mg/kg	03.05.2021 13:08	
Diesel Range Organics (DRO)	<50.0	1000	881	88	849	85	70-130	4	20	mg/kg	03.05.2021 13:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		84		82		70-130	%	03.05.2021 13:08
o-Terphenyl	74		81		77		70-130	%	03.05.2021 13:08

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

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

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

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



Tetra Tech- Midland Endurance

Analytical Method: TPH By SW8015 Mod

Seq Number: 3152838

Matrix: Solid

Prep Method: SW8015P

Date Prep: 03.05.2021

MB Sample Id: 7722735-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.05.2021 12:46	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3152840

Matrix: Solid

Prep Method: SW8015P

Date Prep: 03.05.2021

MB Sample Id: 7722738-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.05.2021 12:46	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3152838

Matrix: Soil

Prep Method: SW8015P

Date Prep: 03.05.2021

Parent Sample Id: 689953-001

MS Sample Id: 689953-001 S

MSD Sample Id: 689953-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	1020	102	1060	106	70-130	4	20	mg/kg	03.05.2021 14:12	
Diesel Range Organics (DRO)	<49.9	998	1110	111	1160	116	70-130	4	20	mg/kg	03.05.2021 14:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		92		70-130	%	03.05.2021 14:12
o-Terphenyl	81		86		70-130	%	03.05.2021 14:12

Analytical Method: TPH By SW8015 Mod

Seq Number: 3152840

Matrix: Soil

Prep Method: SW8015P

Date Prep: 03.05.2021

Parent Sample Id: 690337-001

MS Sample Id: 690337-001 S

MSD Sample Id: 690337-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1260	126	1280	128	70-130	2	20	mg/kg	03.05.2021 14:12	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1130	113	70-130	1	20	mg/kg	03.05.2021 14:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		114		70-130	%	03.05.2021 14:12
o-Terphenyl	109		111		70-130	%	03.05.2021 14:12

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

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

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

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



Tetra Tech- Midland Endurance

Analytical Method: BTEX by EPA 8021B

Seq Number: 3153406

Matrix: Solid

Prep Method: SW5035A

Date Prep: 03.11.2021

MB Sample Id: 7723099-1-BLK

LCS Sample Id: 7723099-1-BKS

LCSD Sample Id: 7723099-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.107	107	0.0998	100	70-130	7	35	mg/kg	03.12.2021 06:42	
Toluene	<0.00200	0.100	0.103	103	0.105	105	70-130	2	35	mg/kg	03.12.2021 06:42	
Ethylbenzene	<0.00200	0.100	0.103	103	0.104	104	70-130	1	35	mg/kg	03.12.2021 06:42	
m,p-Xylenes	<0.00400	0.200	0.205	103	0.208	104	70-130	1	35	mg/kg	03.12.2021 06:42	
o-Xylene	<0.00200	0.100	0.107	107	0.108	108	70-130	1	35	mg/kg	03.12.2021 06:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		97		100		70-130	%	03.12.2021 06:42
4-Bromofluorobenzene	99		99		98		70-130	%	03.12.2021 06:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3153519

Matrix: Solid

Prep Method: SW5035A

Date Prep: 03.12.2021

MB Sample Id: 7723198-1-BLK

LCS Sample Id: 7723198-1-BKS

LCSD Sample Id: 7723198-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0924	92	0.0920	92	70-130	0	35	mg/kg	03.12.2021 12:49	
Toluene	<0.00200	0.100	0.0883	88	0.0886	89	70-130	0	35	mg/kg	03.12.2021 12:49	
Ethylbenzene	<0.00200	0.100	0.0882	88	0.0884	88	70-130	0	35	mg/kg	03.12.2021 12:49	
m,p-Xylenes	<0.00400	0.200	0.179	90	0.179	90	70-130	0	35	mg/kg	03.12.2021 12:49	
o-Xylene	<0.00200	0.100	0.0995	100	0.0960	96	70-130	4	35	mg/kg	03.12.2021 12:49	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		102		103		70-130	%	03.12.2021 12:49
4-Bromofluorobenzene	92		95		97		70-130	%	03.12.2021 12:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3153406

Matrix: Soil

Prep Method: SW5035A

Date Prep: 03.11.2021

Parent Sample Id: 690617-001

MS Sample Id: 690617-001 S

MSD Sample Id: 690617-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.0874	88	0.0929	93	70-130	6	35	mg/kg	03.12.2021 07:23	
Toluene	<0.00198	0.0990	0.0833	84	0.0866	87	70-130	4	35	mg/kg	03.12.2021 07:23	
Ethylbenzene	<0.00198	0.0990	0.0770	78	0.0798	80	70-130	4	35	mg/kg	03.12.2021 07:23	
m,p-Xylenes	<0.00396	0.198	0.154	78	0.160	80	70-130	4	35	mg/kg	03.12.2021 07:23	
o-Xylene	<0.00198	0.0990	0.0771	78	0.0787	79	70-130	2	35	mg/kg	03.12.2021 07:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	03.12.2021 07:23
4-Bromofluorobenzene	95		97		70-130	%	03.12.2021 07:23

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

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

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

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



Tetra Tech- Midland Endurance

Analytical Method: BTEX by EPA 8021B

Seq Number: 3153519

Parent Sample Id: 690614-001

Matrix: Soil

MS Sample Id: 690614-001 S

Prep Method: SW5035A

Date Prep: 03.12.2021

MSD Sample Id: 690614-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0774	78	0.0827	83	70-130	7	35	mg/kg	03.12.2021 13:30	
Toluene	<0.00199	0.0996	0.0742	74	0.0789	79	70-130	6	35	mg/kg	03.12.2021 13:30	
Ethylbenzene	<0.00199	0.0996	0.0739	74	0.0792	80	70-130	7	35	mg/kg	03.12.2021 13:30	
m,p-Xylenes	<0.00398	0.199	0.149	75	0.160	80	70-130	7	35	mg/kg	03.12.2021 13:30	
o-Xylene	<0.00199	0.0996	0.0790	79	0.0845	85	70-130	7	35	mg/kg	03.12.2021 13:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		104		70-130	%	03.12.2021 13:30
4-Bromofluorobenzene	98		97		70-130	%	03.12.2021 13:30

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

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

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

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

Analysis Request of Chain of Custody Record

Page : 1 of 1



Tetra Tech, Inc.

 901 West Wall Street, Suite 100
 Midland, Texas 79701
 Tel (432) 682-4559
 Fax (432) 682-3946

Client Name: EOG		Site Manager: Clair Gonzales	
Project Name: Endurance		Contact Info:	
Project Location: Lea County, NM		Project #: 212C-MD-02419 Task:2100	
Invoice to: EOG: James Kennedy			
Receiving Laboratory: Xenco		Sampler Signature: Devin Dominguez	
Comments:			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION		SAMPLING		MATERIAL	PRESERVATIVE METHOD					# CONTAINERS	FILTERED (Y/N)		
	DATE	TIME	YEAR: 2020	DATE		TIME	WATER	SOIL	HCL	HNO ₃			ICE	NONE
	AH-1 (0-1)		3/4/2021			X							1	N
	AH-1 (1.5-2)		3/4/2021			X							1	N
	AH-2 (0-1)		3/4/2021			X							1	N
	AH-2 (1.5-2)		3/4/2021			X							1	N
	AH-3 (0-1)		3/4/2021			X							1	N
	AH-3 (1.5-2)		3/4/2021			X							1	N
	AH-4 (0-1)		3/4/2021			X							1	N
	AH-4 (1.5-2)		3/4/2021			X							1	N

LAB USE ONLY	REMARKS:	ANALYSIS REQUEST (Circle or Specify Method No.)																					
		BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	HOLD	

Relinquished by: <i>[Signature]</i> Date: 3/5/21 Time: <i>[Signature]</i>	Received by: <i>[Signature]</i> Date: 3/5/21 Time: <i>[Signature]</i>
Relinquished by: Date: Time:	Received by: Date: Time:

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 03.05.2021 12.41.00 PM

Work Order #: 690619

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR8

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 03.05.2021

Checklist reviewed by:



Jessica Kramer

Date: 03.08.2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 55298

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 55298
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	None	11/16/2021