

Incident ID	
District RP	
Facility ID	
Application ID	

JR47H-200305-C-1410

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?	80 Ft (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input checked="" 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 checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

State of New Mexico
Oil Conservation Division

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

Printed Name: Dean Ericson Title: Sr. Environmental Specialist
 Signature:  Date: 3/3/20
 email: Dean.Ericson@energytransfer.com Telephone: 817-302-9573

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2003054617
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: Dean Ericson Title: Sr. Environmental Specialist
 Signature:  Date: 3/3/20
 email: Dean.Ericson@energytransfer.com Telephone: 817-302-9573

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: _____

Remediation Summary and Soil Closure Request

ETC Texas Pipeline, Ltd. F-16-4 Pipeline

Lea County, New Mexico
Unit Letter M, Section 10, Township 22 South, Range 37 East
Latitude 32.401098 North, Longitude 103.155626 West
NMOCD Reference No. 1RP-Pending

Prepared By:

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



Lance Crenshaw



Joel W. Lowry



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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of ETC Texas Pipeline, Ltd., has prepared this Remediation Summary and Soil Closure Request for the Release Site known as the F-16-4 Pipeline. Details of the release are summarized below:

Location of Release Source				
Latitude: <u>32.401098</u>		Longitude: <u>-103.155626</u>		
Provided GPS are in WGS84 format.				
Site Name: <u>F-16-4 Pipeline</u>		Site Type: <u>Pipeline</u>		
Date Release Discovered: <u>11/14/2019</u>		API # (if applicable): <u>N/A</u>		
Unit Letter	Section	Township	Range	County
M	10	22S	37E	Lea
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Private (Name <u>Priscilla Brunson Moody</u>)				
Nature and Volume of Release				
<input type="checkbox"/> Crude Oil	Volume Released (bbls)		Volume Recovered (bbls)	
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) <u>16.92</u>		Volume Recovered (bbls) <u>0</u>	
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input checked="" type="checkbox"/> Natural Gas	Volume Released (Mcf) <u>82.8</u>		Volume Recovered (Mcf) <u>0</u>	
<input type="checkbox"/> Other (describe)	Volume/Weight Released		Volume/Weight Recovered	
Cause of Release: The release was attributed to corrosion of the pipeline segment.				
Initial Response				
<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.				

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

2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half mile radius of the Release Site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

What is the shallowest depth to groundwater beneath the area affected by the release?	~80'	
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

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

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

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

Closure Criteria for Soil Impacted by a Release			
Probable Depth to Groundwater	Constituent	Method	Limit
~80'	Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	100 mg/kg
	BTEX	EPA SW-846 Methods 8021b or 8260b	50 mg/kg
	Benzene	EPA SW-846 Methods 8021b or 8260b	10 mg/kg

4.0 REMEDIATION ACTIVITIES SUMMARY

On January 3, 2020, Etech conducted an initial site assessment. During the initial site assessment, a series of hand-augered soil bores (SP1 @ Surf., SP1 @ 1', SP2 @ Surf, SP2 @ 1') were advanced within the release margins in an effort to determine the vertical extent of soil impacts. In addition, hand-augered soil bores (North, South, East, West) were advanced at the inferred edges of the affected area in an effort to determine the horizontal extent of soil impacts. During the advancement of the hand-augered soil bores, field soil samples were collected and field-screened for concentrations of chloride utilizing a Hach Quantab® chloride test kit.

On January 13, 2020, Etech revisited the release site. During the site visit, a series of hand-augered soil bores (SP1 @ 2', SP2 @ 2') were advanced within the release margins in an effort to determine the vertical extent of soil impacts. In addition, hand-augered soil bores (NH @ 2', EH @ 2', SH @ 2', WH @ 2') were advanced at the inferred edges of the affected area in an effort to determine the horizontal extent of soil impacts. During the advancement of the hand-augered soil bores, field soil samples were collected and field-screened for the presence of concentrations of chloride utilizing a Hach Quantab® chloride

A "Site & Sample Location Map" is provided as Figure 3. Field data and soil profile logs, if applicable, are provided as Appendix B.

Based on field observations and field test data, fourteen (14) delineation soil samples (SP1 @ Surf., SP1 @ 1', SP1 @ 2', SP2 @ Surf., SP2 @ 1', SP2 @ 2', North, NH @ 2', South, SH @ 2', East, EH @ 2', West, WH @ 2') were submitted to the laboratory for analysis of BTEX, TPH and Chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Remediation Standard in each of the submitted soil samples with the exception of soil sample SP2 @ 2', which exhibited a TPH concentration of 402 mg/kg. A "Soil Chemistry Table" is provided as Table 1. Laboratory Analytical Reports are provided in Appendix C.

On January 30, 2020, remediation activities commenced at the Site. In accordance with the NMOCD, impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standard was excavated and stockpiled on-site, pending final disposition at an NMOCD-approved surface waste facility. The floor and sidewalls of the excavation were advanced until field observations and test results suggested BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria.

On January 30, 2020, Etech collected ten (10) excavation confirmation soil samples (NW, EW, WW, SW, SP 1 @ 2', SP 2 @ 2', SP 3 @ 2', SP 4 @ 2', SP 5 @ 2', SP 6 @ 2') from the floor and sidewalls of the excavated area. The collected soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations below the NMOCD Closure Criteria in each of the submitted soil samples with the exception of soil samples EW, SP 5 @ 2', and SP 6 @ 2', which exhibited TPH concentrations of 452.7 mg/kg, 261.4 mg/kg, and 1,436.7 mg/kg, respectively.

On February 7, 2020, excavation activities resumed at the Site. Impacted soil in the areas characterized by soil samples EW, SP 5 @ 2', and SP 6 @ 2' were excavated and transported to an NMOCD-approved surface waste facility for disposal. Upon excavating impacted soil affected above the NMOCD Closure Criteria remaining in-situ, Etech collected, three (3) additional excavation confirmation soil samples (SP 5B @ 3', SP 6B @ 3', EWB) and submitted them to the laboratory for analysis of TPH. Laboratory analytical results indicated TPH concentrations were below the applicable NMOCD Closure Criteria in each of the submitted soil samples.

A "Site & Sample Location Map" is provided as Figure 3. A "Soil Chemistry Table" is provided as Table 1. Laboratory Analytical Reports are provided in Appendix C. Field data and soil profile logs, if applicable, are provided as Appendix B.

The final dimensions of the excavated area were approximately 45 Ft. in length, 10 to 35 Ft in width and ranged from 2 to 3 Ft. in depth. During the course of remediation activities approximately 276 cubic yards of impacted soil were transported to an NMOCD-approved surface waste facility for disposal.

5.0 RESTORATION, RECLAMATION AND RE-VEGETATION PLAN

Upon receiving laboratory analytical results from excavation confirmation soil samples, the excavated area was backfilled with 276 cu. yds. of locally sourced, non-impacted "like" material placed at or near original relative positions. The affected area was contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable. Areas affected by remediation and closure activities will be reseeded with a landowner-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the site.

6.0 SOIL CLOSURE REQUEST

Remediation activities were conducted in accordance with applicable NMOCD Regulations. Impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standard was excavated and transported to an NMOCD-approved disposal facility. Laboratory analytical results from excavation confirmation soil samples indicate BTEX, TPH and chloride were below the NMOCD Closure Criteria and/or NMOCD Reclamation Standard in each of the submitted soil samples.

Based on laboratory analytical results and field activities conducted to date, Etech recommends ETC Texas Pipeline, Ltd. provide copies of this Remediation Summary and Soil Closure Request to the appropriate agencies and request closure be granted to the F-16-4 Pipeline Site.

7.0 LIMITATIONS

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

This report has been prepared for the benefit of ETC Texas Pipeline, Ltd.. Use of the information contained in this report is prohibited within the consent of Etech and/or ETC Texas Pipeline, Ltd..

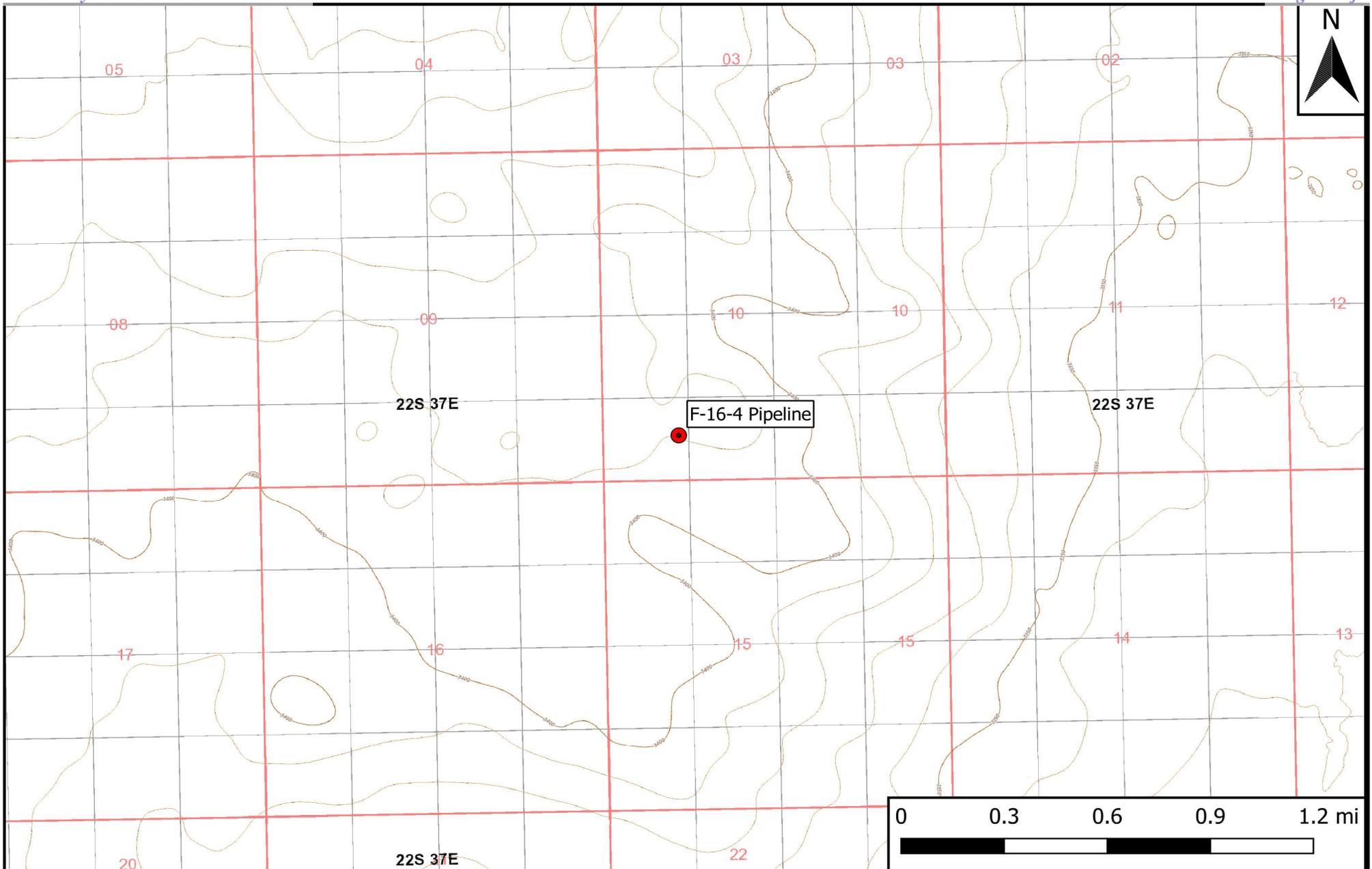
8.0 DISTRIBUTION

ETC Texas Pipeline, Ltd.
600 N. Marienfeld. St.
Suite 700
Midland, TX 79701

New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 1
1220 South St. Francis Drive
Santa Fe, NM 87505

(Electronic Submission)

Figure 1 Topographic Map



Legend

- Site Location

Figure 1
Topographic Map
ETC Texas Pipeline, Ltd.
F-16-4 Pipeline
GPS: 32.401098, -103.155626
Lea County

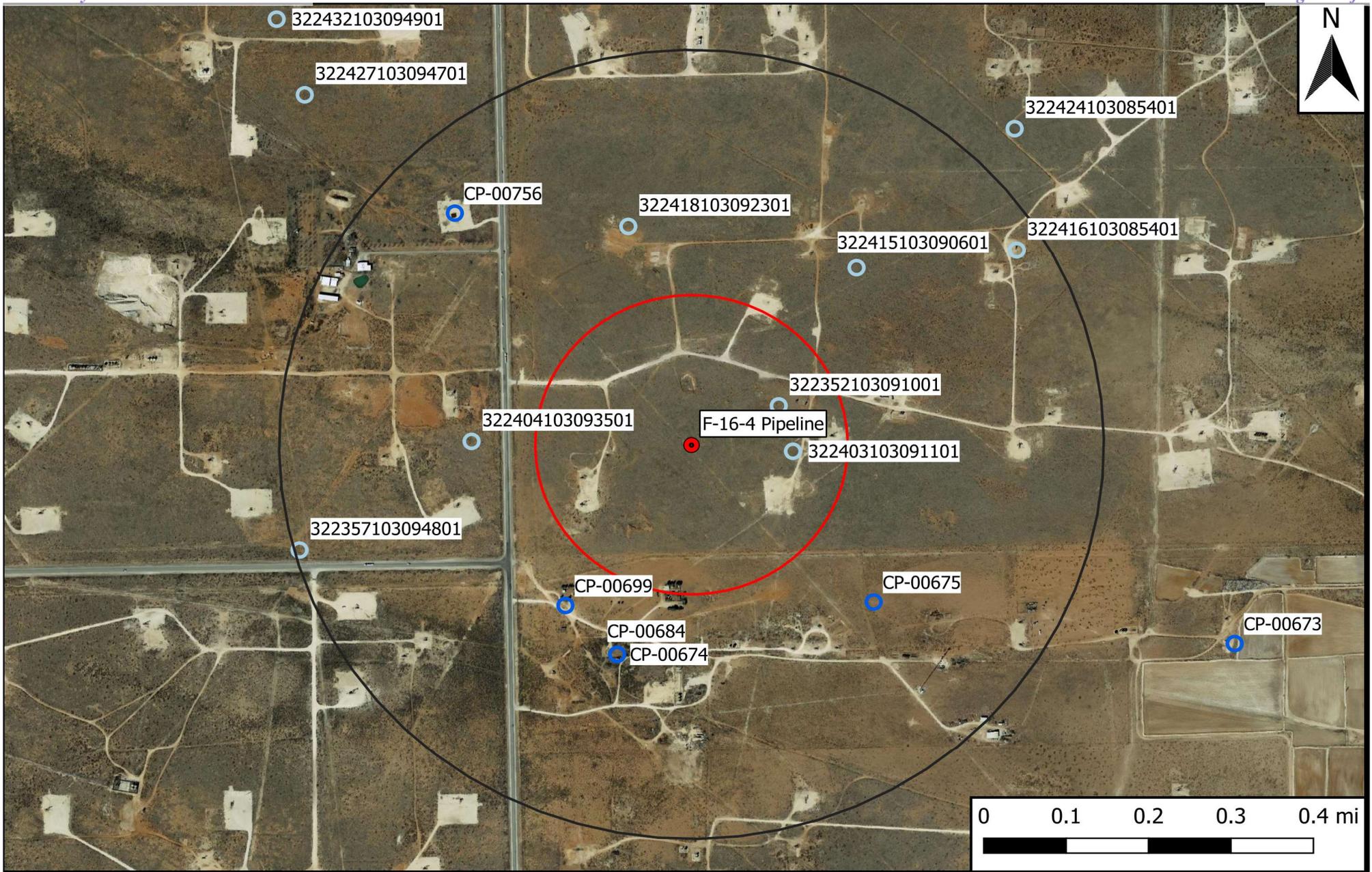
eTECH
Environmental & Safety Solutions, Inc.



Drafted: mag Checked: jwl Date: 12/23/19

Figure 2

Aerial Proximity Map



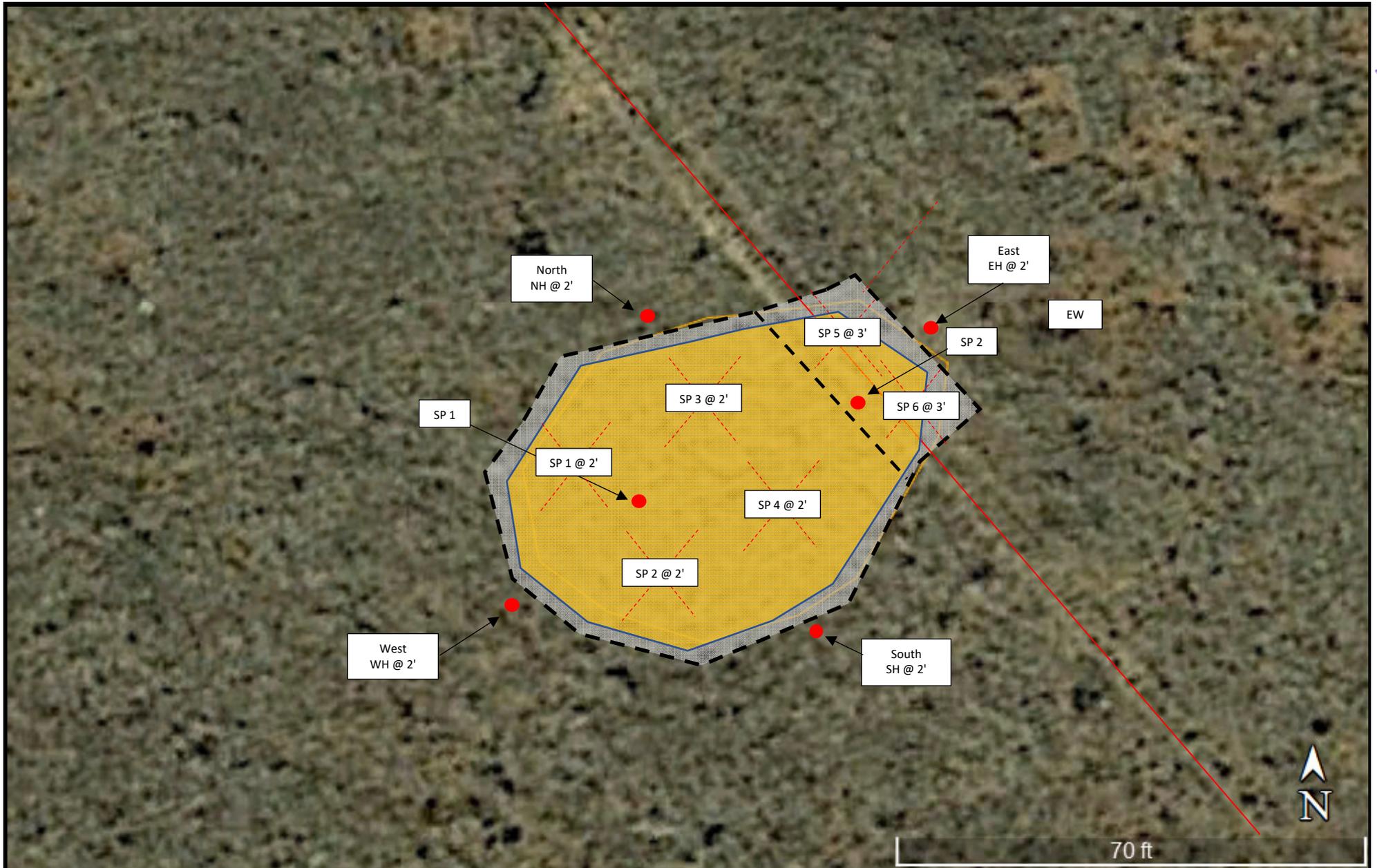
Legend	
	Site Location
	0.5 Mi Radius
	1000 Ft Radius
	1% Annual Flood Chance
	Surface Water
	Well - USGS
	Well - NMOSE
	High Karst
	Medium Karst
	Potash Mine Workings

Figure 2
 Aerial Map
 ETC Texas Pipeline, Ltd.
 F-16-4 Pipeline
 GPS: 32.401098, -103.155626
 Lea County



Figure 3

Site and Sample Location Map



Legend:

	Delineation Sample Point
	Affected Area
	Buried Pipeline
	Excavated Area

Figure 3
 Site and Sample Location Map
 ETC Texas Pipeline, Ltd.
 F-16-4 Pipeline
 GPS: 32.401098, -103.155626
 Lea County

Drafted: mag Checked: jwl Date: 2/14/20

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

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL
ETC Texas Pipeline, Ltd.
F-16-4 Pipeline
NMOCD Ref. #: 1RP-Pending

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
SP1 @ Surf.	1/3/2020	Surf.	Excavated	<0.050	<0.300	<50.0	25,100	25,100	5,890	30,990	240
SP1 @ 1'	1/3/2020	1'	Excavated	<0.050	<0.300	<10.0	94.9	94.9	15.8	110.7	48.0
SP2 @ Surf.	1/3/2020	Surf.	Excavated	<0.050	0.950	176	35,700	35,876	7,820	43,696	912
SP2 @ 1'	1/3/2020	1'	Excavated	<0.050	<0.300	<10.0	164	164	45.3	209.3	16.0
North	1/3/2020	Surf.	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
South	1/3/2020	Surf.	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
East	1/3/2020	Surf.	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
West	1/3/2020	Surf.	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
NH @ 2'	1/13/2020	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
EH @ 2'	1/13/2020	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SH @ 2'	1/13/2020	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
WH @ 2'	1/13/2020	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SP1 @ 2'	1/13/2020	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SP2 @ 2'	1/13/2020	2'	Excavated	<0.050	<0.300	<10.0	273	273	129	402	<16.0
NW	1/30/2020		In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EW	1/30/2020		Excavated	<0.050	1.95	18.5	343	361.5	91.2	452.7	16.0
WW	1/30/2020		In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SW	1/30/2020		In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SP 1 @ 2'	1/30/2020	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SP 2 @ 2'	1/30/2020	2'	In-Situ	<0.050	<0.300	<10.0	12.7	12.7	<10.0	12.7	<16.0
SP 3 @ 2'	1/30/2020	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SP 4 @ 2'	1/30/2020	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SP 5 @ 2'	1/30/2020	2'	Excavated	<0.050	<0.300	<10.0	233	233	28.4	261.4	<16.0
SP 6 @ 2'	1/30/2020	2'	Excavated	<0.050	3.71	60.7	1240	1300.7	136	1436.7	64.0
SP 5B @ 3'	2/3/2020	3'	In-Situ	N/A	N/A	<10.0	<10.0	<20.0	<10.0	<30.0	N/A
SP 6B @ 3'	2/3/2020	3'	In-Situ	N/A	N/A	<10.0	<10.0	<20.0	<10.0	<30.0	N/A
EWB	2/3/2020		In-Situ	N/A	N/A	<10.0	<10.0	<20.0	<10.0	<30.0	N/A
Closure Criteria				10	50	-	-	NA	-	100	600

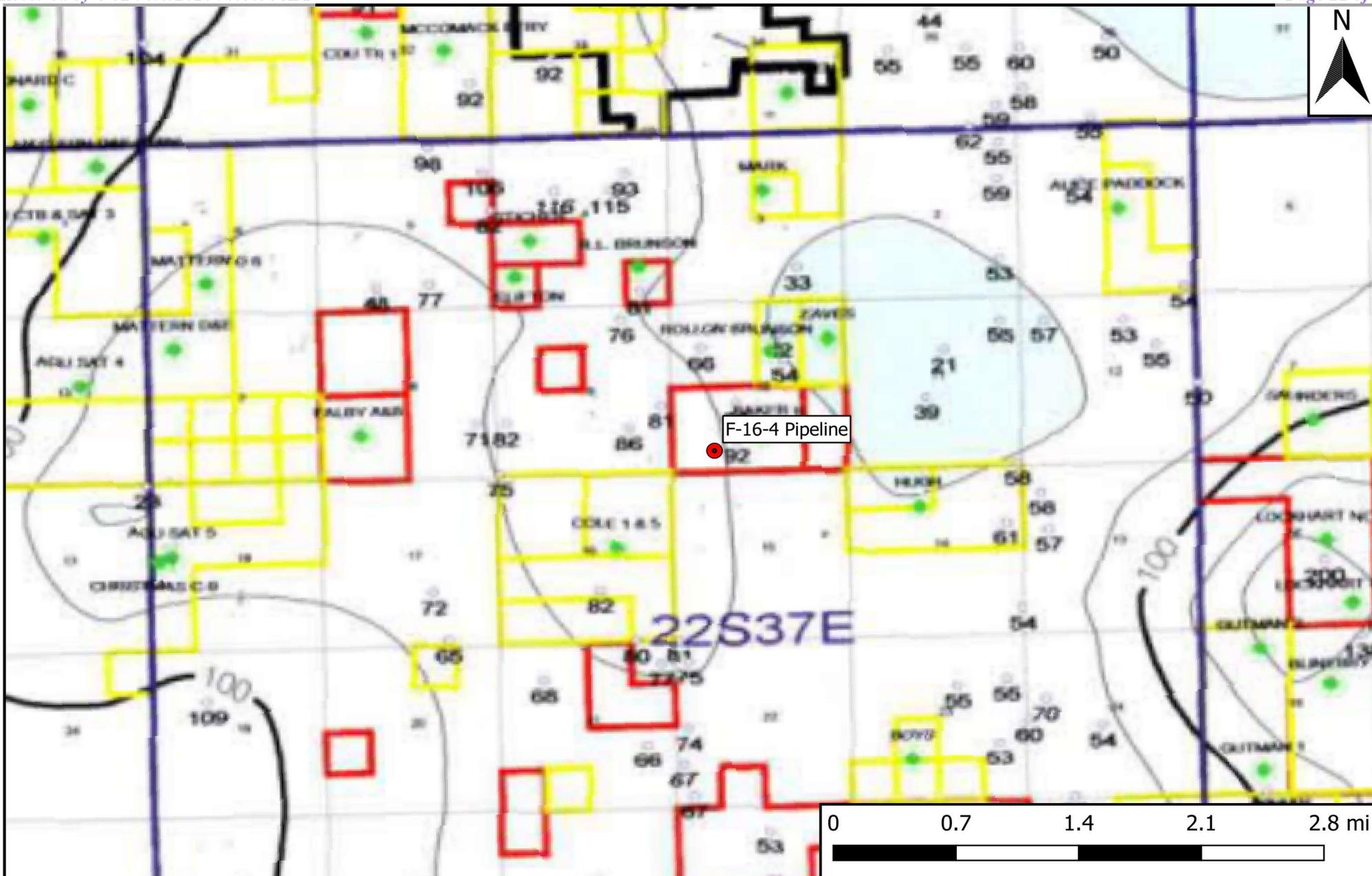
NOTES:

- =

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Appendix A

Depth to Groundwater Information



Legend
 ● Site Location

Figure 4
 Inferred Depth to Groundwater Trend Map
 ETC Texas Pipeline, Ltd.
 F-16-4 Pipeline
 GPS: 32.401098, -103.155626
 Lea County





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
CP 00699	CP	LE	LE	1	1	1	15	22S	37E	673215	3586066*	408	163	100	63
CP 00674	CP	LE	LE	1	1	15	22S	37E	673316	3585967*	449	100	100	75	25
CP 00684	CP	LE	LE	1	1	15	22S	37E	673316	3585967*	449	200	200	180	20
CP 00675	CP	LE	LE	2	2	1	15	22S	37E	673817	3586073*	477	100	100	
CP 00756	CP	LE	LE	2	2	4	09	22S	37E	672999	3586863*	659	125	125	85 40

Average Depth to Water: **110 feet**
 Minimum Depth: **75 feet**
 Maximum Depth: **180 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 673461.18 **Northing (Y):** 3586392.12 **Radius:** 804.67

*UTM location was derived from PLSS - see Help

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12/23/19 11:40 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
CP 00674		1	1	15	22S	37E	673316	3585967*	

Driller License: 208	Driller Company: VAN NOY, W.L.		
Driller Name: VAN NOY, W.L.			
Drill Start Date: 03/19/1985	Drill Finish Date: 03/27/1985	Plug Date:	
Log File Date: 04/08/1985	PCW Rcv Date:	Source: Shallow	
Pump Type:	Pipe Discharge Size:	Estimated Yield: 3 GPM	
Casing Size: 7.00	Depth Well: 100 feet	Depth Water: 75 feet	

Water Bearing Stratifications:	Top	Bottom	Description
	75	100	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	85	100

*UTM location was derived from PLSS - see Help

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12/23/19 11:41 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
CP 00675		2	2	1	15	22S	37E	673817	3586073*

Driller License: 208	Driller Company: VAN NOY, W.L.		
Driller Name: VAN NOY, W.L.			
Drill Start Date: 04/09/1985	Drill Finish Date: 04/12/1985	Plug Date:	
Log File Date: 04/16/1985	PCW Rcv Date:	Source:	
Pump Type:	Pipe Discharge Size:	Estimated Yield:	
Casing Size:	Depth Well: 100 feet	Depth Water:	

*UTM location was derived from PLSS - see Help

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POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
CP 00684		1	1	15	22S	37E	673316	3585967*	

Driller License: 208	Driller Company: VAN NOY, W.L.		
Driller Name: VAN NOY, W.L.			
Drill Start Date: 07/24/1985	Drill Finish Date: 08/01/1985	Plug Date:	
Log File Date: 08/14/1985	PCW Rcv Date:	Source: Shallow	
Pump Type:	Pipe Discharge Size:	Estimated Yield:	
Casing Size: 5.00	Depth Well: 200 feet	Depth Water: 180 feet	

Water Bearing Stratifications:	Top	Bottom	Description
	175	180	Sandstone/Gravel/Conglomerate
	180	200	Other/Unknown

Casing Perforations:	Top	Bottom
	180	200

*UTM location was derived from PLSS - see Help

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New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
CP 00699		1	1	1	15	22S	37E	673215	3586066*

Driller License: 982	Driller Company: EADES, GENE		
Driller Name: EADES, GENE			
Drill Start Date: 06/02/1986	Drill Finish Date: 06/02/1986	Plug Date:	
Log File Date: 07/11/1986	PCW Rcv Date:	Source: Shallow	
Pump Type:	Pipe Discharge Size:	Estimated Yield: 6 GPM	
Casing Size: 5.75	Depth Well: 163 feet	Depth Water: 100 feet	

Water Bearing Stratifications:	Top	Bottom	Description
	100	163	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	123	163

*UTM location was derived from PLSS - see Help

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POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
CP 00756		2	2	4	09	22S	37E	672999	3586863*

Driller License: 208	Driller Company: VAN NOY, W.L.		
Driller Name: VAN NOY, W.L.			
Drill Start Date: 10/26/1990	Drill Finish Date: 10/30/1990	Plug Date:	
Log File Date: 11/05/1990	PCW Rcv Date:	Source: Shallow	
Pump Type:	Pipe Discharge Size:	Estimated Yield:	
Casing Size: 5.00	Depth Well: 125 feet	Depth Water: 85 feet	

Water Bearing Stratifications:	Top	Bottom	Description
	80	125	Sandstone/Gravel/Conglomerate

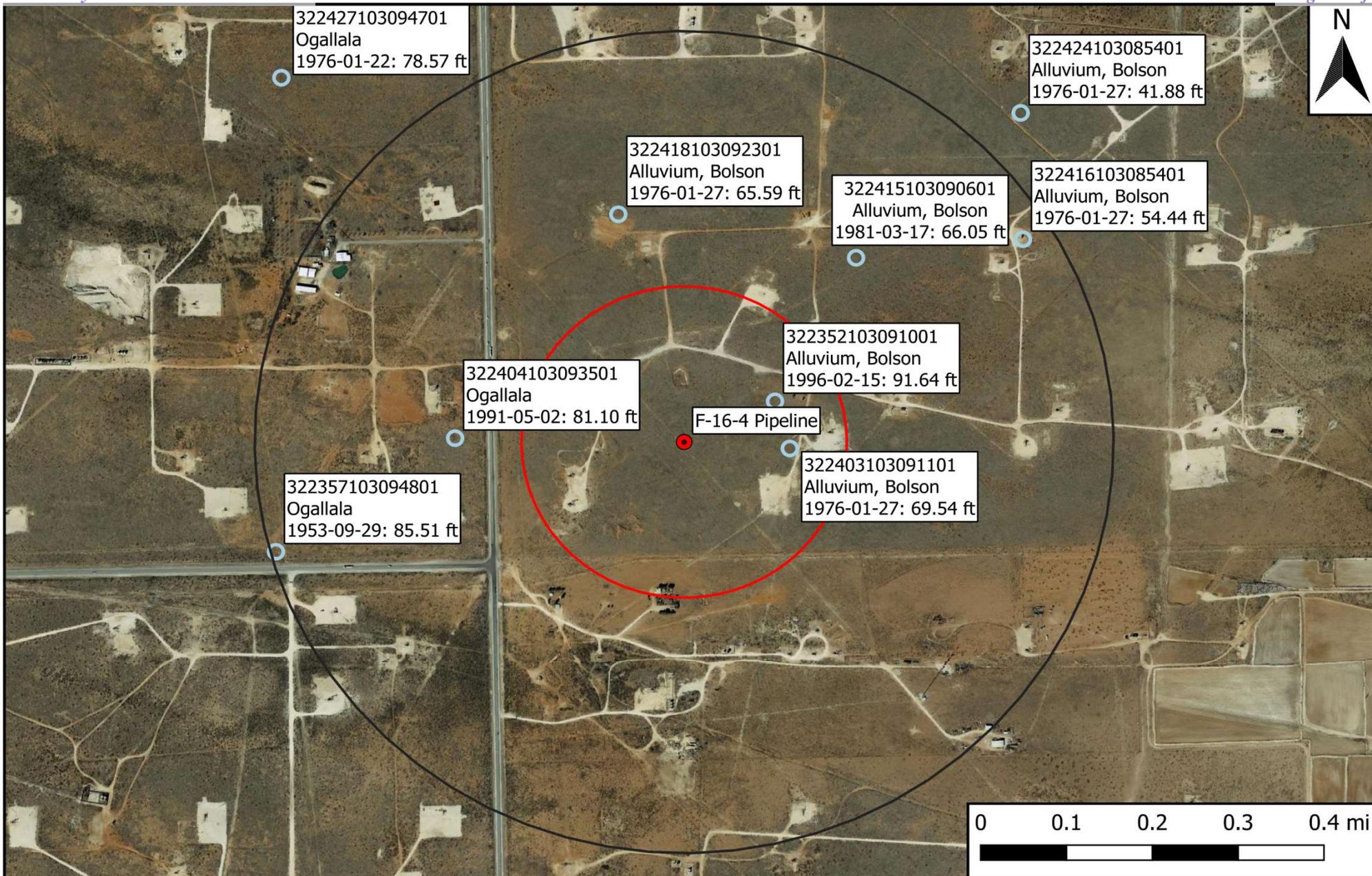
Casing Perforations:	Top	Bottom
	106	121

*UTM location was derived from PLSS - see Help

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POINT OF DIVERSION SUMMARY



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

Figure 5
 USGS Well Proximity Map
 ETC Texas Pipeline, Ltd.
 F-16-4 Pipeline
 GPS: 32.401098, -103.155626
 Lea County





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Search Results -- 1 sites found

Agency code = usgs

site_no list =
• 322352103091001

Minimum number of levels = 1

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

USGS 322352103091001 22S.37E.10.341422

Available data for this site

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°24'06", Longitude 103°09'12" NAD27

Land-surface elevation 3,410.40 feet above NGVD29

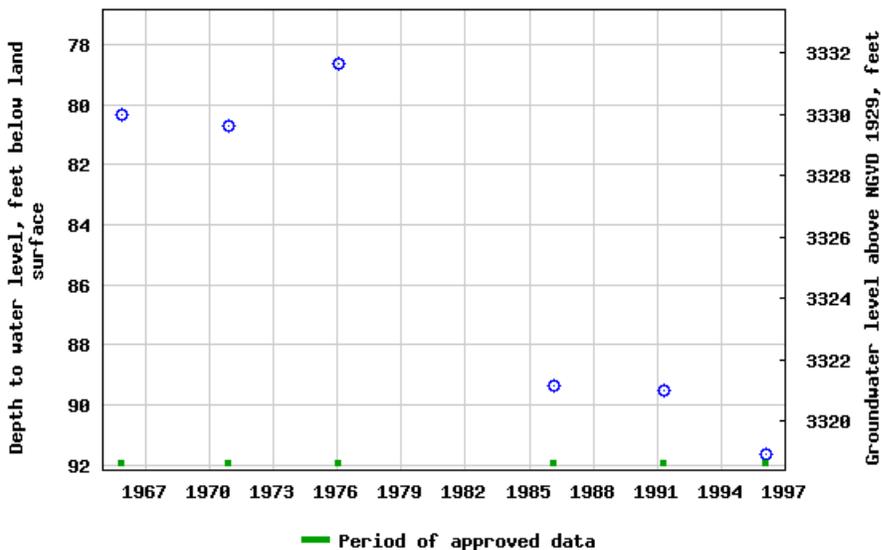
The depth of the well is 12 feet below land surface.

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

USGS 322352103091001 22S.37E.10.341422



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0.61 0.45 nadww01



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• 322357103094801

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USGS 322357103094801 22S.37E.09.423331

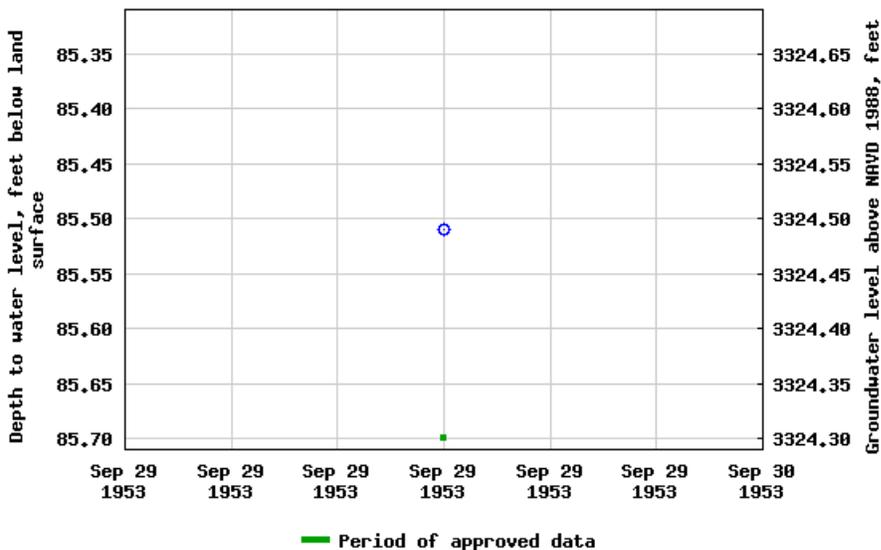
Available data for this site

Lea County, New Mexico
 Hydrologic Unit Code 13070007
 Latitude 32°23'57", Longitude 103°09'48" NAD27
 Land-surface elevation 3,410 feet above NAVD88
 The depth of the well is 115 feet below land surface.
 This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

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

USGS 322357103094801 22S.37E.09.423331



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Agency code = usgs
 site_no list =
 • 322403103091101

Minimum number of levels = 1

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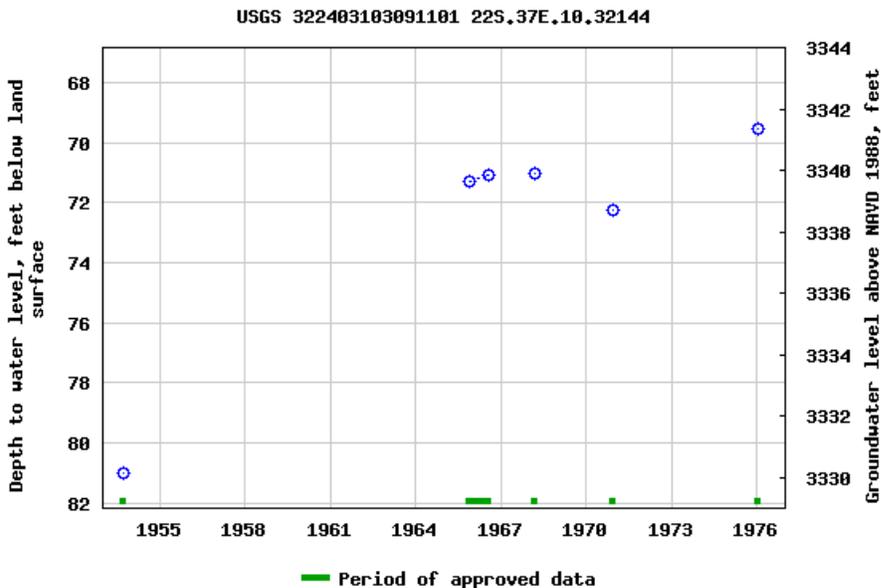
USGS 322403103091101 22S.37E.10.32144

Available data for this site

Lea County, New Mexico
 Hydrologic Unit Code 13070007
 Latitude 32°24'03", Longitude 103°09'11" NAD27
 Land-surface elevation 3,411 feet above NAVD88
 The depth of the well is 85 feet below land surface.
 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



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Groundwater

Geographic Area:

United States

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Agency code = usgs

site_no list =

- 322404103093501

Minimum number of levels = 1

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USGS 322404103093501 22S.37E.09.422431

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°24'04", Longitude 103°09'35" NAD27

Land-surface elevation 3,412 feet above NAVD88

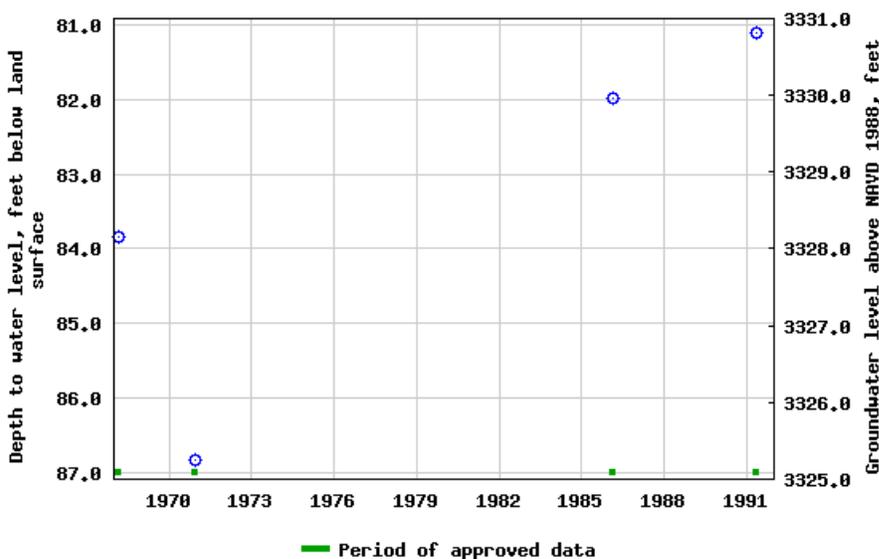
The depth of the well is 140 feet below land surface.

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

Output formats

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

USGS 322404103093501 22S.37E.09.422431



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Data Category:

Groundwater

Geographic Area:

United States

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Agency code = usgs

site_no list =

- 322415103090601

Minimum number of levels = 1

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USGS 322415103090601 22S.37E.10.321442

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°24'15", Longitude 103°09'06" NAD27

Land-surface elevation 3,403 feet above NAVD88

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

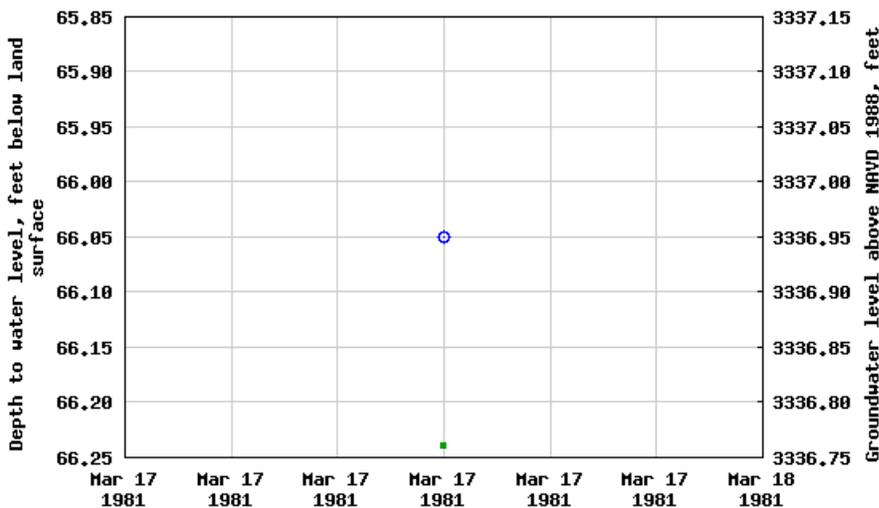
[Table of data](#)

[Tab-separated data](#)

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 • 322416103085401

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USGS 322416103085401 22S.37E.10.23230

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Lea County, New Mexico

Hydrologic Unit Code 13070007

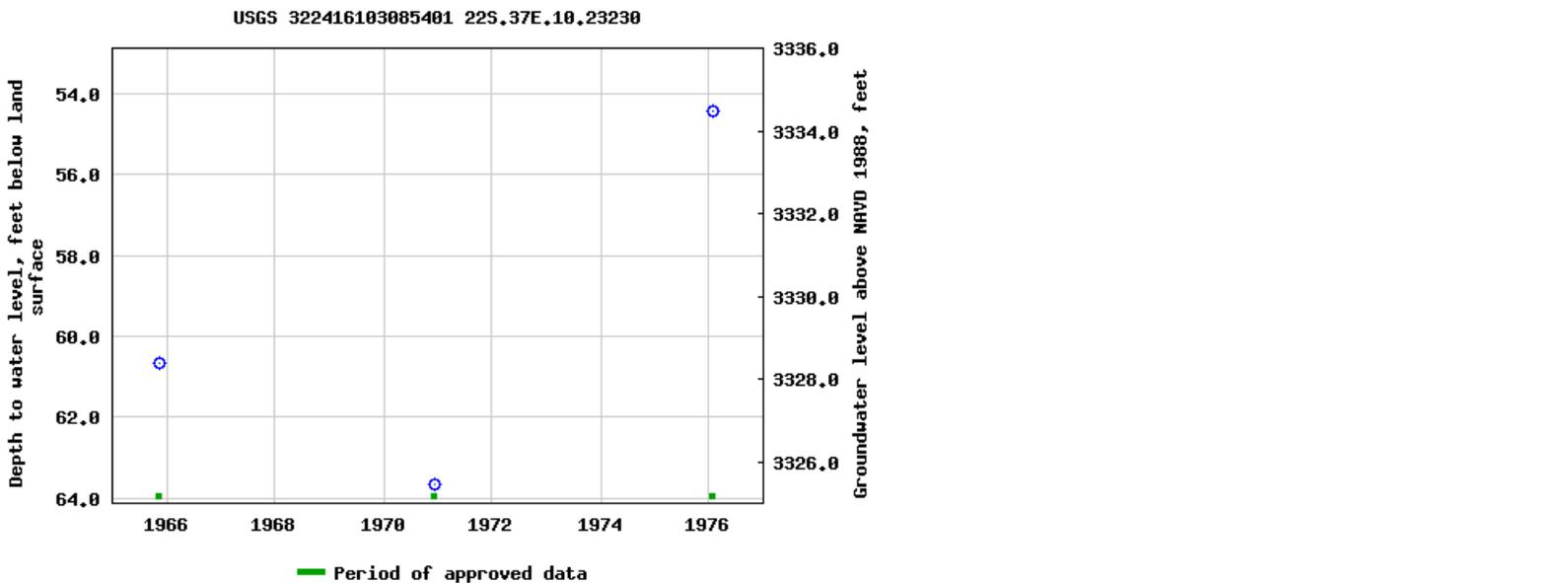
Latitude 32°24'16", Longitude 103°08'54" NAD27

Land-surface elevation 3,389 feet above NAVD88

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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



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- 322418103092301

Minimum number of levels = 1

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USGS 322418103092301 22S.37E.10.132124

Available data for this site

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°24'18", Longitude 103°09'23" NAD27

Land-surface elevation 3,412 feet above NAVD88

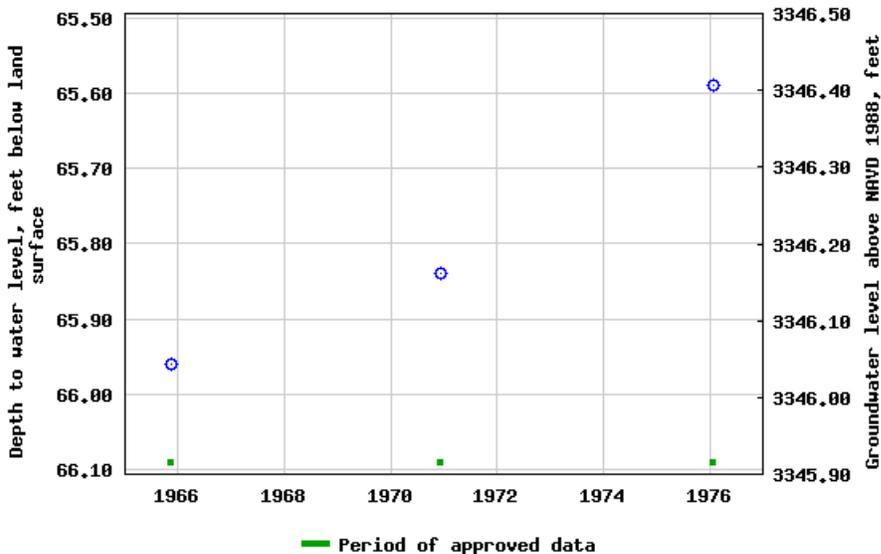
The depth of the well is 68 feet below land surface.

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

USGS 322418103092301 22S.37E.10.132124



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Agency code = usgs

site_no list =

- 322424103085401

Minimum number of levels = 1

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USGS 322424103085401 22S.37E.10.214311

Available data for this site

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°24'24", Longitude 103°08'54" NAD27

Land-surface elevation 3,403 feet above NAVD88

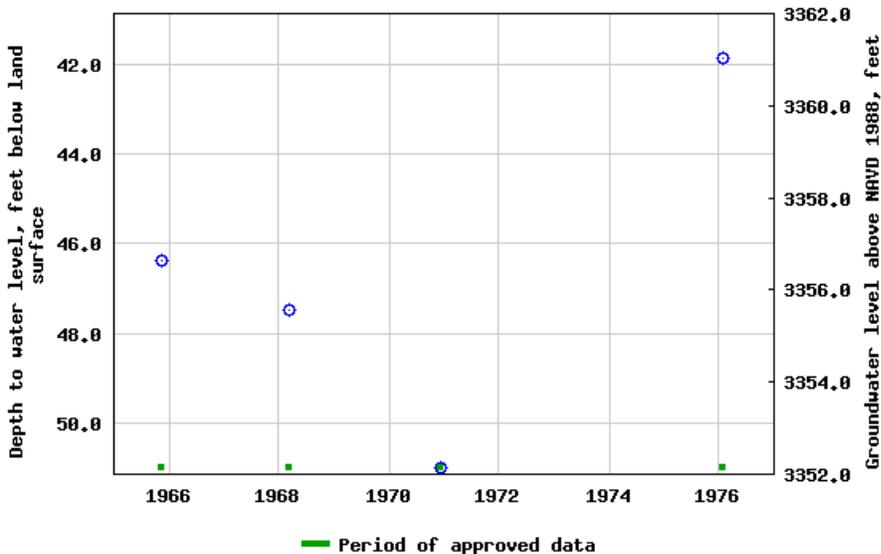
The depth of the well is 63 feet below land surface.

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

USGS 322424103085401 22S.37E.10.214311



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0.58 0.5 nadww01



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USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

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site_no list =

- 322427103094701

Minimum number of levels = 1

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USGS 322427103094701 22S.37E.09.22311

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°24'27", Longitude 103°09'47" NAD27

Land-surface elevation 3,419 feet above NAVD88

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

Output formats

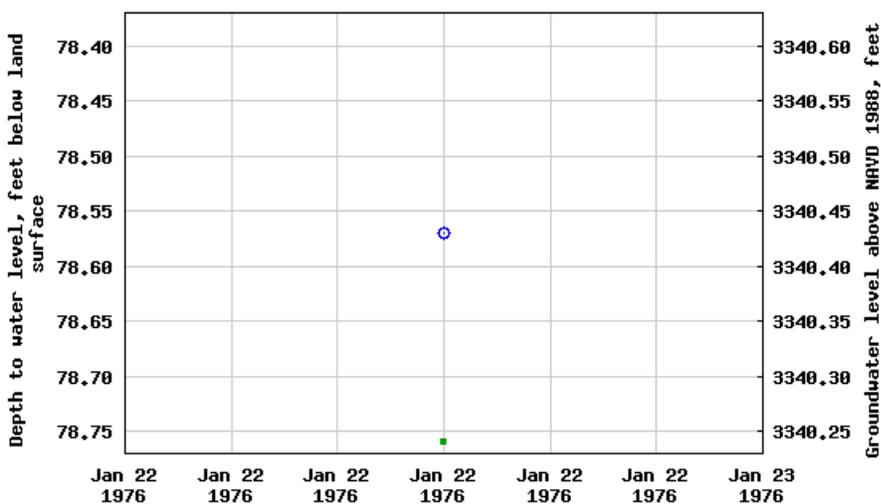
[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)

USGS 322427103094701 22S.37E.09.22311



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0.53 0.49 nadww01

Appendix B

Field Data and Soil Profile Logs



Soil Profile

Date: 4/13/20

Project: F-16-4 Pipeline

Project Number: 11682

Latitude: 32.401098

Longitude: -103.155626

Depth (ft. bgs)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
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- 21
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- 26
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- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40

Description

top soil stained
caliche around 1.5'

Appendix C

Laboratory Analytical Reports



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

January 10, 2020

JOEL LOWRY
ENERGY TRANSFER
P. O. BOX 1226
JAL, NM 88252

RE: F-16

Enclosed are the results of analyses for samples received by the laboratory on 01/03/20 16:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, flowing "C" at the beginning.

Celey D. Keene
Lab Director/Quality Manager



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

Analytical Results For:

ENERGY TRANSFER
 JOEL LOWRY
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received:	01/03/2020	Sampling Date:	01/03/2020
Reported:	01/10/2020	Sampling Type:	Soil
Project Name:	F-16	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

Sample ID: SP 1 @ SURFACE (H000022-01)

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	01/08/2020	ND	1.57	78.6	2.00	8.25	
Toluene*	<0.050	0.050	01/08/2020	ND	1.60	80.0	2.00	8.96	
Ethylbenzene*	<0.050	0.050	01/08/2020	ND	1.68	83.9	2.00	8.62	
Total Xylenes*	<0.150	0.150	01/08/2020	ND	4.91	81.8	6.00	8.46	
Total BTEX	<0.300	0.300	01/08/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	240	16.0	01/09/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<50.0	50.0	01/09/2020	ND	195	97.4	200	0.451		
DRO >C10-C28*	25100	50.0	01/09/2020	ND	224	112	200	1.54		
EXT DRO >C28-C36	5890	50.0	01/09/2020	ND						

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 694 % 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:

ENERGY TRANSFER
 JOEL LOWRY
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/03/2020
 Reported: 01/10/2020
 Project Name: F-16
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 01/03/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 1 @ 1' (H00022-02)

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	01/08/2020	ND	1.57	78.6	2.00	8.25	
Toluene*	<0.050	0.050	01/08/2020	ND	1.60	80.0	2.00	8.96	
Ethylbenzene*	<0.050	0.050	01/08/2020	ND	1.68	83.9	2.00	8.62	
Total Xylenes*	<0.150	0.150	01/08/2020	ND	4.91	81.8	6.00	8.46	
Total BTEX	<0.300	0.300	01/08/2020	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	48.0	16.0	01/09/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2020	ND	195	97.4	200	0.451	
DRO >C10-C28*	94.9	10.0	01/09/2020	ND	224	112	200	1.54	
EXT DRO >C28-C36	15.8	10.0	01/09/2020	ND					

Surrogate: 1-Chlorooctane 90.7 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 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:

ENERGY TRANSFER
 JOEL LOWRY
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received:	01/03/2020	Sampling Date:	01/03/2020
Reported:	01/10/2020	Sampling Type:	Soil
Project Name:	F-16	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

Sample ID: SP 2 @ SURFACE (H000022-03)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/08/2020	ND	1.57	78.6	2.00	8.25	
Toluene*	0.055	0.050	01/08/2020	ND	1.60	80.0	2.00	8.96	
Ethylbenzene*	0.347	0.050	01/08/2020	ND	1.68	83.9	2.00	8.62	
Total Xylenes*	0.548	0.150	01/08/2020	ND	4.91	81.8	6.00	8.46	
Total BTEX	0.950	0.300	01/08/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 142 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	01/09/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	176	50.0	01/09/2020	ND	195	97.4	200	0.451	
DRO >C10-C28*	35700	50.0	01/09/2020	ND	224	112	200	1.54	
EXT DRO >C28-C36	7820	50.0	01/09/2020	ND					

Surrogate: 1-Chlorooctane 198 % 41-142

Surrogate: 1-Chlorooctadecane 901 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENERGY TRANSFER
 JOEL LOWRY
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/03/2020
 Reported: 01/10/2020
 Project Name: F-16
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 01/03/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 2 @ 1' (H000022-04)

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	01/08/2020	ND	1.57	78.6	2.00	8.25	
Toluene*	<0.050	0.050	01/08/2020	ND	1.60	80.0	2.00	8.96	
Ethylbenzene*	<0.050	0.050	01/08/2020	ND	1.68	83.9	2.00	8.62	
Total Xylenes*	<0.150	0.150	01/08/2020	ND	4.91	81.8	6.00	8.46	
Total BTEX	<0.300	0.300	01/08/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 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	16.0	16.0	01/09/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2020	ND	195	97.4	200	0.451	
DRO >C10-C28*	164	10.0	01/09/2020	ND	224	112	200	1.54	
EXT DRO >C28-C36	45.3	10.0	01/09/2020	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENERGY TRANSFER
 JOEL LOWRY
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/03/2020
 Reported: 01/10/2020
 Project Name: F-16
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 01/03/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: NORTH (H00022-05)

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	01/08/2020	ND	1.57	78.6	2.00	8.25		
Toluene*	<0.050	0.050	01/08/2020	ND	1.60	80.0	2.00	8.96		
Ethylbenzene*	<0.050	0.050	01/08/2020	ND	1.68	83.9	2.00	8.62		
Total Xylenes*	<0.150	0.150	01/08/2020	ND	4.91	81.8	6.00	8.46		
Total BTEX	<0.300	0.300	01/08/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	<16.0	16.0	01/09/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/09/2020	ND	195	97.4	200	0.451		
DRO >C10-C28*	<10.0	10.0	01/09/2020	ND	224	112	200	1.54		
EXT DRO >C28-C36	<10.0	10.0	01/09/2020	ND						

Surrogate: 1-Chlorooctane 82.3 % 41-142

Surrogate: 1-Chlorooctadecane 94.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENERGY TRANSFER
 JOEL LOWRY
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/03/2020
 Reported: 01/10/2020
 Project Name: F-16
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 01/03/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SOUTH (H00022-06)

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	01/08/2020	ND	1.57	78.6	2.00	8.25		
Toluene*	<0.050	0.050	01/08/2020	ND	1.60	80.0	2.00	8.96		
Ethylbenzene*	<0.050	0.050	01/08/2020	ND	1.68	83.9	2.00	8.62		
Total Xylenes*	<0.150	0.150	01/08/2020	ND	4.91	81.8	6.00	8.46		
Total BTEX	<0.300	0.300	01/08/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 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	<16.0	16.0	01/09/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/09/2020	ND	195	97.4	200	0.451		
DRO >C10-C28*	<10.0	10.0	01/09/2020	ND	224	112	200	1.54		
EXT DRO >C28-C36	<10.0	10.0	01/09/2020	ND						

Surrogate: 1-Chlorooctane 84.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENERGY TRANSFER
 JOEL LOWRY
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/03/2020
 Reported: 01/10/2020
 Project Name: F-16
 Project Number: NONE GIVEN
 Project Location: NONE GIVEN

Sampling Date: 01/03/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: EAST (H00022-07)

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	01/08/2020	ND	1.57	78.6	2.00	8.25	
Toluene*	<0.050	0.050	01/08/2020	ND	1.60	80.0	2.00	8.96	
Ethylbenzene*	<0.050	0.050	01/08/2020	ND	1.68	83.9	2.00	8.62	
Total Xylenes*	<0.150	0.150	01/08/2020	ND	4.91	81.8	6.00	8.46	
Total BTEX	<0.300	0.300	01/08/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 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	<16.0	16.0	01/09/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2020	ND	195	97.4	200	0.451	
DRO >C10-C28*	<10.0	10.0	01/09/2020	ND	224	112	200	1.54	
EXT DRO >C28-C36	<10.0	10.0	01/09/2020	ND					

Surrogate: 1-Chlorooctane 82.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

ENERGY TRANSFER
 JOEL LOWRY
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received:	01/03/2020	Sampling Date:	01/03/2020
Reported:	01/10/2020	Sampling Type:	Soil
Project Name:	F-16	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NONE GIVEN		

Sample ID: WEST (H00022-08)

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	01/08/2020	ND	1.57	78.6	2.00	8.25	
Toluene*	<0.050	0.050	01/08/2020	ND	1.60	80.0	2.00	8.96	
Ethylbenzene*	<0.050	0.050	01/08/2020	ND	1.68	83.9	2.00	8.62	
Total Xylenes*	<0.150	0.150	01/08/2020	ND	4.91	81.8	6.00	8.46	
Total BTEX	<0.300	0.300	01/08/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 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	<16.0	16.0	01/09/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2020	ND	195	97.4	200	0.451	
DRO >C10-C28*	<10.0	10.0	01/09/2020	ND	224	112	200	1.54	
EXT DRO >C28-C36	<10.0	10.0	01/09/2020	ND					

Surrogate: 1-Chlorooctane 84.7 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 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.
S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

January 21, 2020

DEAN ERICSON
ENERGY TRANSFER
P. O. BOX 1226
JAL, NM 88252

RE: F-16-4

Enclosed are the results of analyses for samples received by the laboratory on 01/14/20 16:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene
Lab Director/Quality Manager



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

Analytical Results For:

ENERGY TRANSFER
 DEAN ERICSON
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received:	01/14/2020	Sampling Date:	01/13/2020
Reported:	01/21/2020	Sampling Type:	Soil
Project Name:	F-16-4	Sampling Condition:	Cool & Intact
Project Number:	11682 (PIPELINE)	Sample Received By:	Tamara Oldaker
Project Location:	NEW MEXICO		

Sample ID: NH @ 2' (H000128-01)

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	01/16/2020	ND	2.05	102	2.00	1.09		
Toluene*	<0.050	0.050	01/16/2020	ND	2.04	102	2.00	1.42		
Ethylbenzene*	<0.050	0.050	01/16/2020	ND	2.07	103	2.00	1.53		
Total Xylenes*	<0.150	0.150	01/16/2020	ND	6.06	101	6.00	1.06		
Total BTEX	<0.300	0.300	01/16/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 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	16.0	16.0	01/16/2020	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	01/21/2020	ND	219	110	200	0.276		
DRO >C10-C28*	<10.0	10.0	01/21/2020	ND	236	118	200	0.947		
EXT DRO >C28-C36	<10.0	10.0	01/21/2020	ND						

Surrogate: 1-Chlorooctane 99.3 % 41-142

Surrogate: 1-Chlorooctadecane 99.6 % 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:

ENERGY TRANSFER
 DEAN ERICSON
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/14/2020
 Reported: 01/21/2020
 Project Name: F-16-4
 Project Number: 11682 (PIPELINE)
 Project Location: NEW MEXICO

Sampling Date: 01/13/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: EH @ 2' (H000128-02)

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	01/16/2020	ND	1.98	98.8	2.00	6.81	
Toluene*	<0.050	0.050	01/16/2020	ND	1.97	98.5	2.00	7.39	
Ethylbenzene*	<0.050	0.050	01/16/2020	ND	2.00	99.8	2.00	7.46	
Total Xylenes*	<0.150	0.150	01/16/2020	ND	5.81	96.8	6.00	7.51	
Total BTEX	<0.300	0.300	01/16/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 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	<16.0	16.0	01/16/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/17/2020	ND	219	110	200	0.276	
DRO >C10-C28*	<10.0	10.0	01/17/2020	ND	236	118	200	0.947	
EXT DRO >C28-C36	<10.0	10.0	01/17/2020	ND					

Surrogate: 1-Chlorooctane 92.3 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 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:

ENERGY TRANSFER
 DEAN ERICSON
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/14/2020
 Reported: 01/21/2020
 Project Name: F-16-4
 Project Number: 11682 (PIPELINE)
 Project Location: NEW MEXICO

Sampling Date: 01/13/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SH @ 2' (H000128-03)

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	01/16/2020	ND	1.72	86.0	2.00	16.1		
Toluene*	<0.050	0.050	01/16/2020	ND	1.75	87.7	2.00	15.4		
Ethylbenzene*	<0.050	0.050	01/16/2020	ND	1.77	88.3	2.00	16.8		
Total Xylenes*	<0.150	0.150	01/16/2020	ND	5.15	85.9	6.00	16.9		
Total BTEX	<0.300	0.300	01/16/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 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	16.0	16.0	01/16/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/17/2020	ND	219	110	200	0.276		
DRO >C10-C28*	<10.0	10.0	01/17/2020	ND	236	118	200	0.947		
EXT DRO >C28-C36	<10.0	10.0	01/17/2020	ND						

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 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:

ENERGY TRANSFER
 DEAN ERICSON
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/14/2020
 Reported: 01/21/2020
 Project Name: F-16-4
 Project Number: 11682 (PIPELINE)
 Project Location: NEW MEXICO

Sampling Date: 01/13/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: WH @ 2' (H000128-04)

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	01/16/2020	ND	1.72	86.0	2.00	16.1		
Toluene*	<0.050	0.050	01/16/2020	ND	1.75	87.7	2.00	15.4		
Ethylbenzene*	<0.050	0.050	01/16/2020	ND	1.77	88.3	2.00	16.8		
Total Xylenes*	<0.150	0.150	01/16/2020	ND	5.15	85.9	6.00	16.9		
Total BTEX	<0.300	0.300	01/16/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 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	16.0	16.0	01/16/2020	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/17/2020	ND	219	110	200	0.276		
DRO >C10-C28*	<10.0	10.0	01/17/2020	ND	236	118	200	0.947		
EXT DRO >C28-C36	<10.0	10.0	01/17/2020	ND						

Surrogate: 1-Chlorooctane 99.5 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 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:

ENERGY TRANSFER
 DEAN ERICSON
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/14/2020
 Reported: 01/21/2020
 Project Name: F-16-4
 Project Number: 11682 (PIPELINE)
 Project Location: NEW MEXICO

Sampling Date: 01/13/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 2' (H000128-05)

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	01/16/2020	ND	1.72	86.0	2.00	16.1	
Toluene*	<0.050	0.050	01/16/2020	ND	1.75	87.7	2.00	15.4	
Ethylbenzene*	<0.050	0.050	01/16/2020	ND	1.77	88.3	2.00	16.8	
Total Xylenes*	<0.150	0.150	01/16/2020	ND	5.15	85.9	6.00	16.9	
Total BTEX	<0.300	0.300	01/16/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 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	16.0	16.0	01/16/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/17/2020	ND	219	110	200	0.276	
DRO >C10-C28*	<10.0	10.0	01/17/2020	ND	236	118	200	0.947	
EXT DRO >C28-C36	<10.0	10.0	01/17/2020	ND					

Surrogate: 1-Chlorooctane 99.7 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 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:

ENERGY TRANSFER
 DEAN ERICSON
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received: 01/14/2020
 Reported: 01/21/2020
 Project Name: F-16-4
 Project Number: 11682 (PIPELINE)
 Project Location: NEW MEXICO

Sampling Date: 01/13/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 2 @ 2' (H000128-06)

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	01/16/2020	ND	1.72	86.0	2.00	16.1	
Toluene*	<0.050	0.050	01/16/2020	ND	1.75	87.7	2.00	15.4	
Ethylbenzene*	<0.050	0.050	01/16/2020	ND	1.77	88.3	2.00	16.8	
Total Xylenes*	<0.150	0.150	01/16/2020	ND	5.15	85.9	6.00	16.9	
Total BTEX	<0.300	0.300	01/16/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 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	<16.0	16.0	01/16/2020	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/17/2020	ND	219	110	200	0.276	
DRO >C10-C28*	273	10.0	01/17/2020	ND	236	118	200	0.947	
EXT DRO >C28-C36	129	10.0	01/17/2020	ND					

Surrogate: 1-Chlorooctane 90.7 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

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.

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

- ND Analyte NOT DETECTED at or above the reporting limit

- RPD Relative Percent Difference

- ** Samples not received at proper temperature of 6°C or below.

- *** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

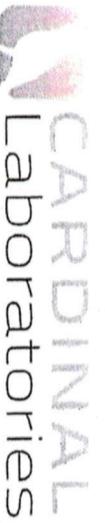
Cardinal Laboratories

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

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

BILL TO

ANALYSIS REQUEST

Company Name: **Eteck Environmental** P.O. #:
 Project Manager: **Soel Lowry** Company: **ETE**
 Address: **3100 Plains Hwy** Attn: **Dean Ericson**
 City: **Livingston** State: **WV** Zip: **26260**
 Phone #: **432-446-4450** Fax #: Address:
 Project #: **11688** Project Owner: **ETE** City:
 Project Name: **F-16-4 Pipeline** State: Zip:
 Project Location: **Lea Co, New Mexico** Phone #:
 Sampler Name: **Miguel Ramirez** Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	Chloride	TPH	BTEX 8021
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :							
HDD0128																
	1 NH02'	G	1									1-13-20	3:06	X	X	X
	2 ETH02'	G	1									1-13-20	2:45	X	X	X
	3 SH02'	G	1									1-13-20	3:15	X	X	X
	4 WH02'	G	1									1-13-20	3:45	X	X	X
	5 SP102'	G	1									1-13-20	3:30	X	X	X
	6 SP102'	G	1									1-13-20	4:00	X	X	X

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable services. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *[Signature]* Date: **1-14-20**
 Received By: *[Signature]* Date: **1-16-20**
 Time: **16:10**
 Relinquished By: *[Signature]* Received By: *[Signature]*

REMARKS: email results to **joel@eteckenv.com**
Lowry@eteckenv.com

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: **0.1c #113**
 Sample Condition: Intact Cool Yes No
 CHECKED BY: **Joel** (Initials)

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476
 Form-609, R 2.0



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

January 31, 2020

JOEL LOWRY

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: ETC F-16

Enclosed are the results of analyses for samples received by the laboratory on 01/30/20 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 01/30/2020
 Reported: 01/31/2020
 Project Name: ETC F-16
 Project Number: 11682
 Project Location: EDDY CO NM

Sampling Date: 01/30/2020
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: NW (H000298-01)

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	01/31/2020	ND	2.09	104	2.00	3.46	
Toluene*	<0.050	0.050	01/31/2020	ND	2.06	103	2.00	3.39	
Ethylbenzene*	<0.050	0.050	01/31/2020	ND	2.05	102	2.00	3.22	
Total Xylenes*	<0.150	0.150	01/31/2020	ND	6.05	101	6.00	3.04	
Total BTEX	<0.300	0.300	01/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/31/2020	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	01/31/2020	ND	205	103	200	1.76	
DRO >C10-C28*	<10.0	10.0	01/31/2020	ND	211	105	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	01/31/2020	ND					

Surrogate: 1-Chlorooctane 83.4 % 41-142

Surrogate: 1-Chlorooctadecane 86.3 % 37.6-147

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Analytical Results For:

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

Received:	01/30/2020	Sampling Date:	01/30/2020
Reported:	01/31/2020	Sampling Type:	Soil
Project Name:	ETC F-16	Sampling Condition:	Cool & Intact
Project Number:	11682	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: EW (H000298-02)

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	01/31/2020	ND	2.09	104	2.00	3.46	
Toluene*	0.117	0.050	01/31/2020	ND	2.06	103	2.00	3.39	
Ethylbenzene*	0.404	0.050	01/31/2020	ND	2.05	102	2.00	3.22	
Total Xylenes*	1.43	0.150	01/31/2020	ND	6.05	101	6.00	3.04	
Total BTEX	1.95	0.300	01/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/31/2020	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*	18.5	10.0	01/31/2020	ND	205	103	200	1.76	
DRO >C10-C28*	343	10.0	01/31/2020	ND	211	105	200	2.25	
EXT DRO >C28-C36	91.2	10.0	01/31/2020	ND					

Surrogate: 1-Chlorooctane 81.4 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 37.6-147

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Received:	01/30/2020	Sampling Date:	01/30/2020
Reported:	01/31/2020	Sampling Type:	Soil
Project Name:	ETC F-16	Sampling Condition:	Cool & Intact
Project Number:	11682	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: WW (H000298-03)

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	01/31/2020	ND	2.09	104	2.00	3.46	
Toluene*	<0.050	0.050	01/31/2020	ND	2.06	103	2.00	3.39	
Ethylbenzene*	<0.050	0.050	01/31/2020	ND	2.05	102	2.00	3.22	
Total Xylenes*	<0.150	0.150	01/31/2020	ND	6.05	101	6.00	3.04	
Total BTEX	<0.300	0.300	01/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/31/2020	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	01/31/2020	ND	205	103	200	1.76	
DRO >C10-C28*	<10.0	10.0	01/31/2020	ND	211	105	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	01/31/2020	ND					

Surrogate: 1-Chlorooctane 84.8 % 41-142

Surrogate: 1-Chlorooctadecane 88.4 % 37.6-147

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Received:	01/30/2020	Sampling Date:	01/30/2020
Reported:	01/31/2020	Sampling Type:	Soil
Project Name:	ETC F-16	Sampling Condition:	Cool & Intact
Project Number:	11682	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: SW (H000298-04)

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	01/31/2020	ND	2.09	104	2.00	3.46	
Toluene*	<0.050	0.050	01/31/2020	ND	2.06	103	2.00	3.39	
Ethylbenzene*	<0.050	0.050	01/31/2020	ND	2.05	102	2.00	3.22	
Total Xylenes*	<0.150	0.150	01/31/2020	ND	6.05	101	6.00	3.04	
Total BTEX	<0.300	0.300	01/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/31/2020	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/31/2020	ND	205	103	200	1.76	
DRO >C10-C28*	<10.0	10.0	01/31/2020	ND	211	105	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	01/31/2020	ND					

Surrogate: 1-Chlorooctane 92.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.8 % 37.6-147

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Received:	01/30/2020	Sampling Date:	01/30/2020
Reported:	01/31/2020	Sampling Type:	Soil
Project Name:	ETC F-16	Sampling Condition:	Cool & Intact
Project Number:	11682	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: SP 1 @ 2' (H000298-05)

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	01/31/2020	ND	2.09	104	2.00	3.46		
Toluene*	<0.050	0.050	01/31/2020	ND	2.06	103	2.00	3.39		
Ethylbenzene*	<0.050	0.050	01/31/2020	ND	2.05	102	2.00	3.22		
Total Xylenes*	<0.150	0.150	01/31/2020	ND	6.05	101	6.00	3.04		
Total BTEX	<0.300	0.300	01/31/2020	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/31/2020	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/31/2020	ND	205	103	200	1.76		
DRO >C10-C28*	<10.0	10.0	01/31/2020	ND	211	105	200	2.25		
EXT DRO >C28-C36	<10.0	10.0	01/31/2020	ND						

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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Received:	01/30/2020	Sampling Date:	01/30/2020
Reported:	01/31/2020	Sampling Type:	Soil
Project Name:	ETC F-16	Sampling Condition:	Cool & Intact
Project Number:	11682	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: SP 2 @ 2' (H000298-06)

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	01/31/2020	ND	2.09	104	2.00	3.46		
Toluene*	<0.050	0.050	01/31/2020	ND	2.06	103	2.00	3.39		
Ethylbenzene*	<0.050	0.050	01/31/2020	ND	2.05	102	2.00	3.22		
Total Xylenes*	<0.150	0.150	01/31/2020	ND	6.05	101	6.00	3.04		
Total BTEX	<0.300	0.300	01/31/2020	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/31/2020	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/31/2020	ND	205	103	200	1.76		
DRO >C10-C28*	12.7	10.0	01/31/2020	ND	211	105	200	2.25		
EXT DRO >C28-C36	<10.0	10.0	01/31/2020	ND						

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.1 % 37.6-147

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 Fax To: (575) 396-1429

Received:	01/30/2020	Sampling Date:	01/30/2020
Reported:	01/31/2020	Sampling Type:	Soil
Project Name:	ETC F-16	Sampling Condition:	Cool & Intact
Project Number:	11682	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: SP 3 @ 2' (H000298-07)

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	01/31/2020	ND	2.09	104	2.00	3.46	
Toluene*	<0.050	0.050	01/31/2020	ND	2.06	103	2.00	3.39	
Ethylbenzene*	<0.050	0.050	01/31/2020	ND	2.05	102	2.00	3.22	
Total Xylenes*	<0.150	0.150	01/31/2020	ND	6.05	101	6.00	3.04	
Total BTEX	<0.300	0.300	01/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	01/31/2020	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/31/2020	ND	205	103	200	1.76	
DRO >C10-C28*	<10.0	10.0	01/31/2020	ND	211	105	200	2.25	
EXT DRO >C28-C36	<10.0	10.0	01/31/2020	ND					

Surrogate: 1-Chlorooctane 88.1 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

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Received:	01/30/2020	Sampling Date:	01/30/2020
Reported:	01/31/2020	Sampling Type:	Soil
Project Name:	ETC F-16	Sampling Condition:	Cool & Intact
Project Number:	11682	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: SP 4 @ 2' (H000298-08)

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	01/31/2020	ND	2.09	104	2.00	3.46		
Toluene*	<0.050	0.050	01/31/2020	ND	2.06	103	2.00	3.39		
Ethylbenzene*	<0.050	0.050	01/31/2020	ND	2.05	102	2.00	3.22		
Total Xylenes*	<0.150	0.150	01/31/2020	ND	6.05	101	6.00	3.04		
Total BTEX	<0.300	0.300	01/31/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/31/2020	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/31/2020	ND	205	103	200	1.76		
DRO >C10-C28*	<10.0	10.0	01/31/2020	ND	211	105	200	2.25		
EXT DRO >C28-C36	<10.0	10.0	01/31/2020	ND						

Surrogate: 1-Chlorooctane 78.6 % 41-142

Surrogate: 1-Chlorooctadecane 81.2 % 37.6-147

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Received:	01/30/2020	Sampling Date:	01/30/2020
Reported:	01/31/2020	Sampling Type:	Soil
Project Name:	ETC F-16	Sampling Condition:	Cool & Intact
Project Number:	11682	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: SP 5 @ 2' (H000298-09)

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	01/31/2020	ND	2.09	104	2.00	3.46		
Toluene*	<0.050	0.050	01/31/2020	ND	2.06	103	2.00	3.39		
Ethylbenzene*	<0.050	0.050	01/31/2020	ND	2.05	102	2.00	3.22		
Total Xylenes*	<0.150	0.150	01/31/2020	ND	6.05	101	6.00	3.04		
Total BTEX	<0.300	0.300	01/31/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	01/31/2020	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	01/31/2020	ND	205	103	200	1.76		
DRO >C10-C28*	233	10.0	01/31/2020	ND	211	105	200	2.25		
EXT DRO >C28-C36	28.4	10.0	01/31/2020	ND						

Surrogate: 1-Chlorooctane 83.5 % 41-142

Surrogate: 1-Chlorooctadecane 93.6 % 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:

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

Received:	01/30/2020	Sampling Date:	01/30/2020
Reported:	01/31/2020	Sampling Type:	Soil
Project Name:	ETC F-16	Sampling Condition:	Cool & Intact
Project Number:	11682	Sample Received By:	Tamara Oldaker
Project Location:	EDDY CO NM		

Sample ID: SP 6 @ 2' (H000298-10)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/31/2020	ND	2.09	104	2.00	3.46	
Toluene*	0.225	0.050	01/31/2020	ND	2.06	103	2.00	3.39	
Ethylbenzene*	0.910	0.050	01/31/2020	ND	2.05	102	2.00	3.22	
Total Xylenes*	2.57	0.150	01/31/2020	ND	6.05	101	6.00	3.04	
Total BTEX	3.71	0.300	01/31/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 133 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	01/31/2020	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	60.7	50.0	01/31/2020	ND	205	103	200	1.76	
DRO >C10-C28*	1240	50.0	01/31/2020	ND	211	105	200	2.25	
EXT DRO >C28-C36	136	50.0	01/31/2020	ND					

Surrogate: 1-Chlorooctane 95.5 % 41-142

Surrogate: 1-Chlorooctadecane 130 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Eteck Environmental
 Project Manager: Joel Lowry
 Address: 3160 Plains Hwy
 City: Lawington State: NM Zip: 88260
 Phone #: 432-448-4457 Fax #: _____
 Project #: 11682 Project Owner: _____
 Project Name: ETC F-16
 Project Location: Eddy Co, New Mexico
 Sampler Name: Miguel Ramirez
 P.O. #: _____ Company: _____
 Attn: _____ Address: _____
 City: _____ State: _____ Zip: _____
 Phone #: _____
 Fax #: _____

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING DATE	TIME	Chloride	TPH	BTEX 8021
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :						
<u>1</u>	<u>NW</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>2</u>	<u>EW</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>3</u>	<u>NW</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>4</u>	<u>SW</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>5</u>	<u>SP1@2'</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>6</u>	<u>SP2@2'</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>7</u>	<u>SP3@2'</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>8</u>	<u>SP4@2'</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>9</u>	<u>SP5@2'</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>10</u>	<u>SP6@2'</u>	<u>C</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>1:30:20</u>	<u>X</u>	<u>X</u>	<u>X</u>	

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Relinquished By: Michael Ramirez Date: 1-30-20 Time: 4:36
 Received By: Joel Lowry Date: _____ Time: _____
 Reserved By: _____

REMARKS: email results to joel@eteckenv.com
Lowry@eteckenv.com
 Add'l Phone #: _____
 Add'l Fax #: _____
 Phone Result: Yes No
 Fax Result: Yes No

Delivered By: (Circle One) UPS - Bus - Other: #113
 Sample Condition: Cool Intact
 Yes No Yes No
 CHECKED BY: Y.S.
 Sample Condition: 3.6c

RUSH!

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476
 Form 005 R 2.0



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

February 04, 2020

DEAN ERICSON
ENERGY TRANSFER
P. O. BOX 1226
JAL, NM 88252

RE: F-16-4

Enclosed are the results of analyses for samples received by the laboratory on 02/03/20 11:36.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene
Lab Director/Quality Manager



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

Analytical Results For:

ENERGY TRANSFER
 DEAN ERICSON
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received:	02/03/2020	Sampling Date:	02/03/2020
Reported:	02/04/2020	Sampling Type:	Soil
Project Name:	F-16-4	Sampling Condition:	Cool & Intact
Project Number:	32.401098-103.155626	Sample Received By:	Tamara Oldaker
Project Location:	NEW MEXICO		

Sample ID: SP 5 B 3' (H000311-01)

TPH 8015M	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2020	ND	226	113	200	2.81	
DRO >C10-C28*	<10.0	10.0	02/03/2020	ND	214	107	200	4.88	
EXT DRO >C28-C36	<10.0	10.0	02/03/2020	ND					
<hr/>									
Surrogate: 1-Chlorooctane	95.1 %	41-142							
Surrogate: 1-Chlorooctadecane	92.6 %	37.6-147							

Sample ID: SP 6 B 3' (H000311-02)

TPH 8015M	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/03/2020	ND	226	113	200	2.81	
DRO >C10-C28*	<10.0	10.0	02/03/2020	ND	214	107	200	4.88	
EXT DRO >C28-C36	<10.0	10.0	02/03/2020	ND					
<hr/>									
Surrogate: 1-Chlorooctane	86.8 %	41-142							
Surrogate: 1-Chlorooctadecane	83.3 %	37.6-147							

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Analytical Results For:

ENERGY TRANSFER
 DEAN ERICSON
 P. O. BOX 1226
 JAL NM, 88252
 Fax To:

Received:	02/03/2020	Sampling Date:	02/03/2020
Reported:	02/04/2020	Sampling Type:	Soil
Project Name:	F-16-4	Sampling Condition:	Cool & Intact
Project Number:	32.401098-103.155626	Sample Received By:	Tamara Oldaker
Project Location:	NEW MEXICO		

Sample ID: EW B 3' (H000311-03)

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	02/03/2020	ND	226	113	200	2.81	
DRO >C10-C28*	<10.0	10.0	02/03/2020	ND	214	107	200	4.88	
EXT DRO >C28-C36	<10.0	10.0	02/03/2020	ND					
<i>Surrogate: 1-Chlorooctane</i>	<i>98.7 %</i>	<i>41-142</i>							
<i>Surrogate: 1-Chlorooctadecane</i>	<i>95.6 %</i>	<i>37.6-147</i>							

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*=Accredited Analyte

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Notes and Definitions

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

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*=Accredited Analyte

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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

Appendix D

Photographic Log

Photographic Log

Dates: 11/14/2019 - 11/14/2019

Photo Number: 1	
Photo Direction: Southeast	
Photo Description: Initial release discovery.	

Photo Number: 2	
Photo Direction: Southwest	
Photo Description: Initial release discovery.	

Photographic Log

Dates: 01/30/2020 - 02/08/2020

Photo Number: 3
Photo Direction: Southwest
Photo Description: Excavation in progress.



Photo Number: 4
Photo Direction: South
Photo Description: Excavation in progress.



Photographic Log

Dates: 02/09/2020 - 02/09/2020

Photo Number: 5
Photo Direction: Northeast
Photo Description: Excavation backfilled and graded.



Photo Number: 6
Photo Direction: Southeast
Photo Description: Excavation backfilled and graded.

