

Incident ID	NRM2023131751
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

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

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

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

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

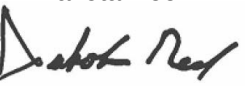
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods,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

State of New Mexico
Oil Conservation Division

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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: Dakota Neel Title: HSE Coordinator
Signature:  Date: 11/2/2020
email: dneel2@concho.com Telephone: 575-746-2010

OCD Only

Received by: Cristina Eads Date: 01/22/2021

Incident ID	NRM2023131751
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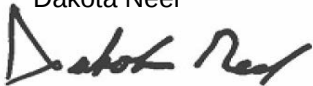
Closure

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

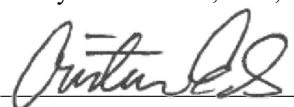
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public 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: Dakota Neel Title: HSE Coordinator
Signature:  Date: 11/2/2020
email: dneel2@concho.com Telephone: 575-746-2010

OCD Only

Received by: Cristina Eads Date: 11/02/2020

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: 01/22/2021

Printed Name: Cristina Eads Title: Environmental Specialist

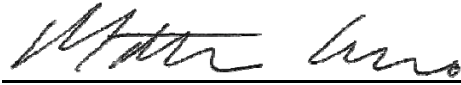
Remediation Summary and Soil Closure Request

COG Operating, LLC Boone 16 State Com 2H

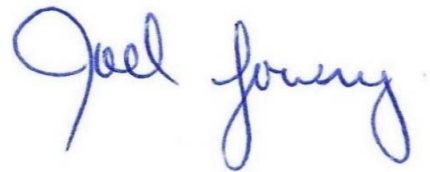
Lea County, New Mexico
Unit Letter O, Section 16, Township 21 South, Range 33 East
Latitude 32.472146 North, Longitude 103.57542 West
NMOCD Reference No. pending

Prepared By:

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



Matthew Grieco



Joel W. Lowry



Midland • San Antonio • Lubbock • Lovington • Lafayette

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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of COG Operating, LLC, has prepared this Remediation Summary and Soil Closure Request for the Release Site known as the Boone 16 State Com 2H. Details of the release are summarized below:

Location of Release Source

Latitude: 32.472146 Longitude: -103.57542

Provided GPS are in WGS84 format.

Site Name: <u>Boone 16 State Com 2H</u>	Site Type: <u>Flare</u>
Date Release Discovered: <u>8/2/2020</u>	API # (if applicable): <u>30-025-41049</u>

Unit Letter	Section	Township	Range	County
O	16	21S	33E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name Merchant Livestock)

Nature and Volume of Release

☒ Crude Oil	Volume Released (bbls) <u>5</u>	Volume Recovered (bbls) <u>4</u>
☒ Produced Water	Volume Released (bbls) <u>1</u>	Volume Recovered (bbls) <u>1</u>
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?	☐ Yes ☐ No ☐ N/A
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released	Volume/Weight Recovered

Cause of Release:

The release was attributed to a system upset condition. A majority of the release was confined to an unlined berm; overspray from the release affected a portion of the surrounding pad.

Initial Response

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

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

2.0 SITE CHARACTERIZATION

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

What is the shallowest depth to groundwater beneath the area affected by the release?	> 100 Ft		
Did the release impact groundwater or surface water?	☐ Yes	☒ No	
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes	☒ No	
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes	☒ No	
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	☐ Yes	☒ No	
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes	☒ No	
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes	☒ No	
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes	☒ No	
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes	☒ No	
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes	☒ No	
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes	☒ No	
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes	☒ No	
Did the release impact areas not on an exploration, development, production or storage site?	☐ Yes	☒ No	

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

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

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

Closure Criteria for Soil Impacted by a Release			
Probable Depth to Groundwater	Constituent	Method	Limit
> 100 Ft	Chloride	EPA 300.0 or SM4500 Cl B	20000 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	2500 mg/kg
	DRO + GRO	EPA SW-846 Method 8015M	1000 mg/kg
	BTEX	EPA SW-846 Methods 8021b or 8260b	50 mg/kg
	Benzene	EPA SW-846 Methods 8021b or 8260b	10 mg/kg

4.0 REMEDIATION ACTIVITIES SUMMARY

On August 10, 2020, remediation activities commenced at the Site. In accordance with the NMOCD, impacted soil affected above the NMOCD Closure Criteria was excavated and stockpiled on-site, pending final disposition at an NMOCD-approved surface waste facility for disposal. The floor and sidewalls of the excavation were advanced until field observations and test results suggested BTEX, TPH and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standard.

On August 11, 2020, Etech collected twenty-seven (27) excavation confirmation soil samples (SP1 @ 1', SP2 @ 1', SP3 @ 1', SP4 @ 1', SP5 @ 1', SP6 @ 1', SP7 @ 1', SP8 @ 1', SP9 @ 3', SP10 @ 4', SP11 @ 4', SP12 @ 4', SP13 @ 3', SP14 @ 4', SP15 @ 2', SP16 @ 2', SP17 @ 2', SP18 @ 2', SP19 @ 2', SP20 @ 2', SP21 @ 2', SP22 @ 2', NW1, NW2B, WW1, WW2B, and SW1). The collected soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples with the exception of SP13 @ 3' (858 mg/kg Cl-) and WW1 (217 mg/kg TPH).

On August 12, 2020, Etech collected ten (10) excavation confirmation soil samples (FL 23@4', FL 24@2', SW1B, SW2, SW3, SW4, EW1C, EW2C, EW3, and WW3). The collected soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples with the exception of SW3 (281 mg/kg TPH).

On August 14, 2020, excavation activities resumed at the Site. Impacted soil in the areas characterized by sample points SP13, WW1, and SW3 were excavated and transported to an NMOCD-approved surface waste facility for disposal. Upon excavating impacted soil remaining in-situ, Etech collected, three (3) additional excavation confirmation soil samples (FL13 @ 4', WW1b and SW3b) and submitted them to the laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard 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 95 Ft. in length, 20 to 65 Ft in width and ranged from 1 to 4 Ft. in depth. During the course of remediation activities approximately 476 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 confirmation soil samples, excavated areas were backfilled with 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. Affected areas not on production pads and/or lease roads will be reseeded with an agency and/or landowner-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the site. Final reclamation and re-vegetation will be conducted in accordance with NMAC 19.15.29.13 upon decommissioning the facility.

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 confirmation soil samples indicate concentrations of BTEX, TPH and chloride are below the NMOCD Closure Criteria and/or NMOCD Reclamation Standard.

Based on laboratory analytical results and field activities conducted to date, Etech recommends COG Operating, LLC provide copies of this Remediation Summary and Soil Closure Request to the appropriate agencies and request closure be granted to the Boone 16 State Com 2H 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. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

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

8.0 DISTRIBUTION

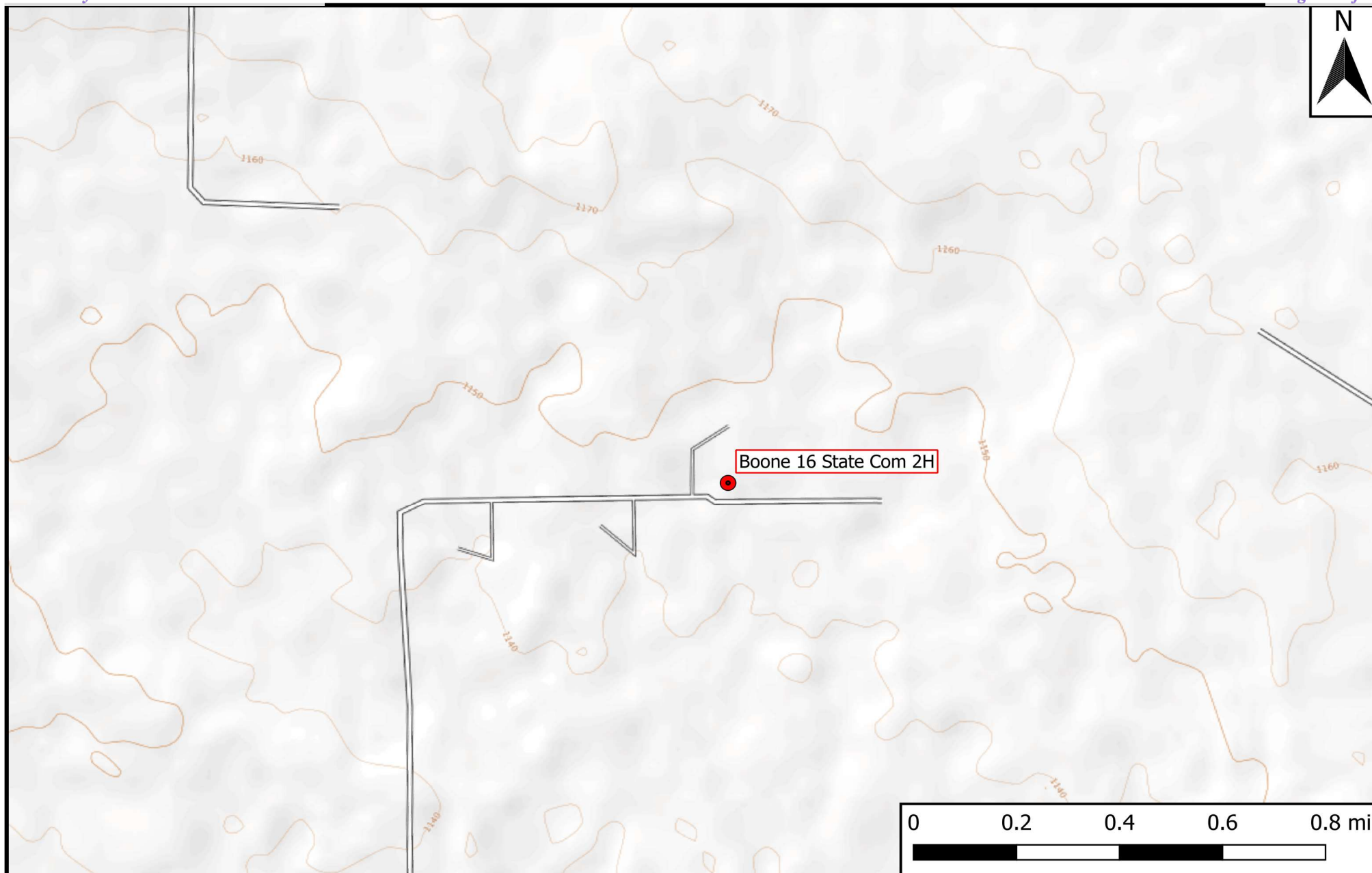
COG Operating, LLC
600 West Illinois Avenue
Midland, TX 79701

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
COG Operating, LLC
Boone 16 State Com 2H
GPS: 32.472146, -103.57542
Lea County



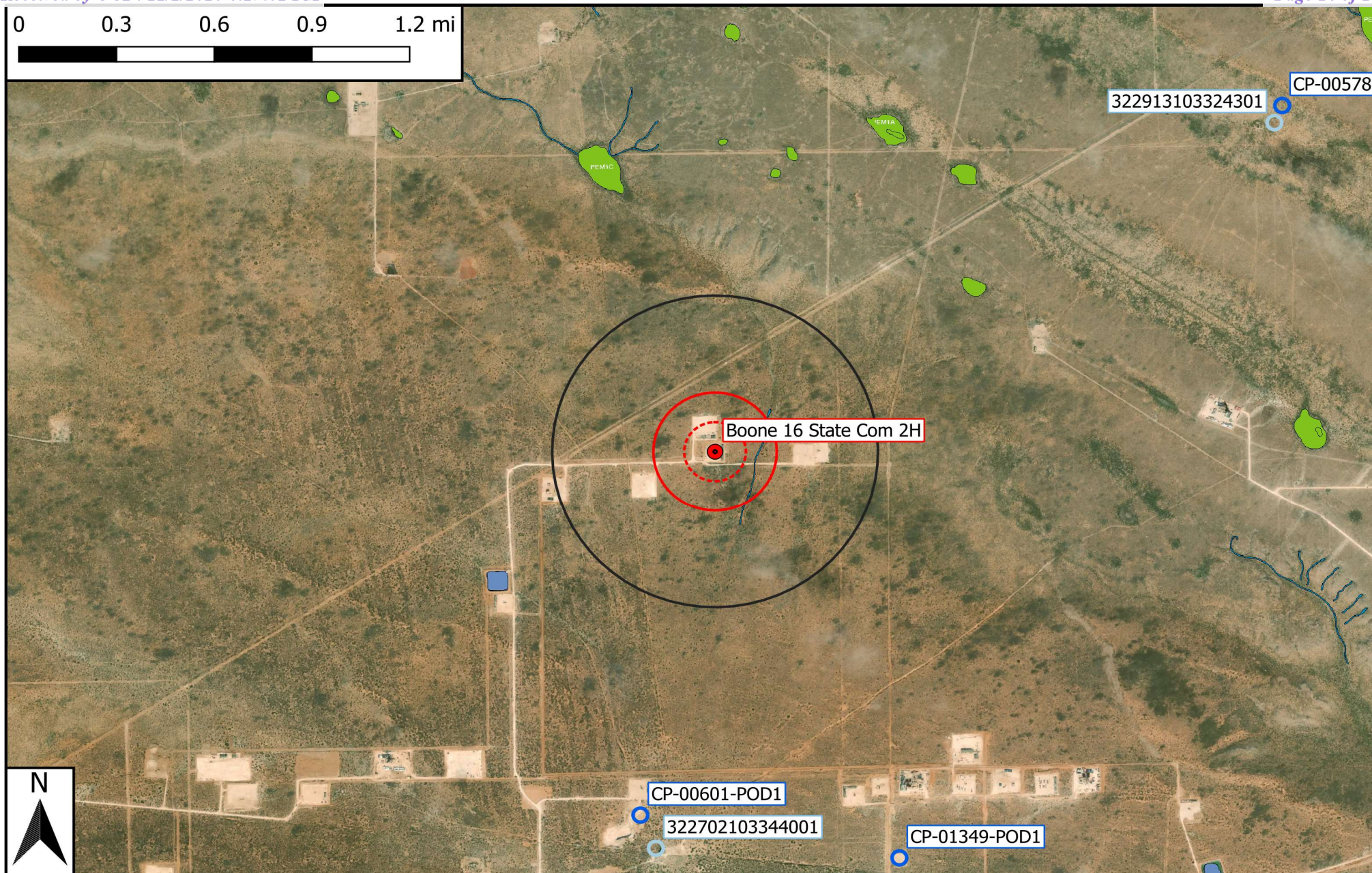
Drafted: mag

Checked: jwl

Date: 8/21/20

Figure 2

Aerial Proximity Map



Legend

- | | |
|---|--|
| ● Site Location | 0.5 Mi Radius |
| ○ Well - NMOSE | 1000 Ft Radius |
| ○ Well - USGS | 500 Ft Radius |
| High Karst | 1% Annual Flood Chance |
| Potash Mine Workings | Lake/Freshwater Pond |
| | Emergent/Forested Wetlands |
| | Riverine |

Figure 2

Aerial Map
 COG Operating, LLC
 Boone 16 State Com 2H
 GPS: 32.472146, -103.57542
 Lea County



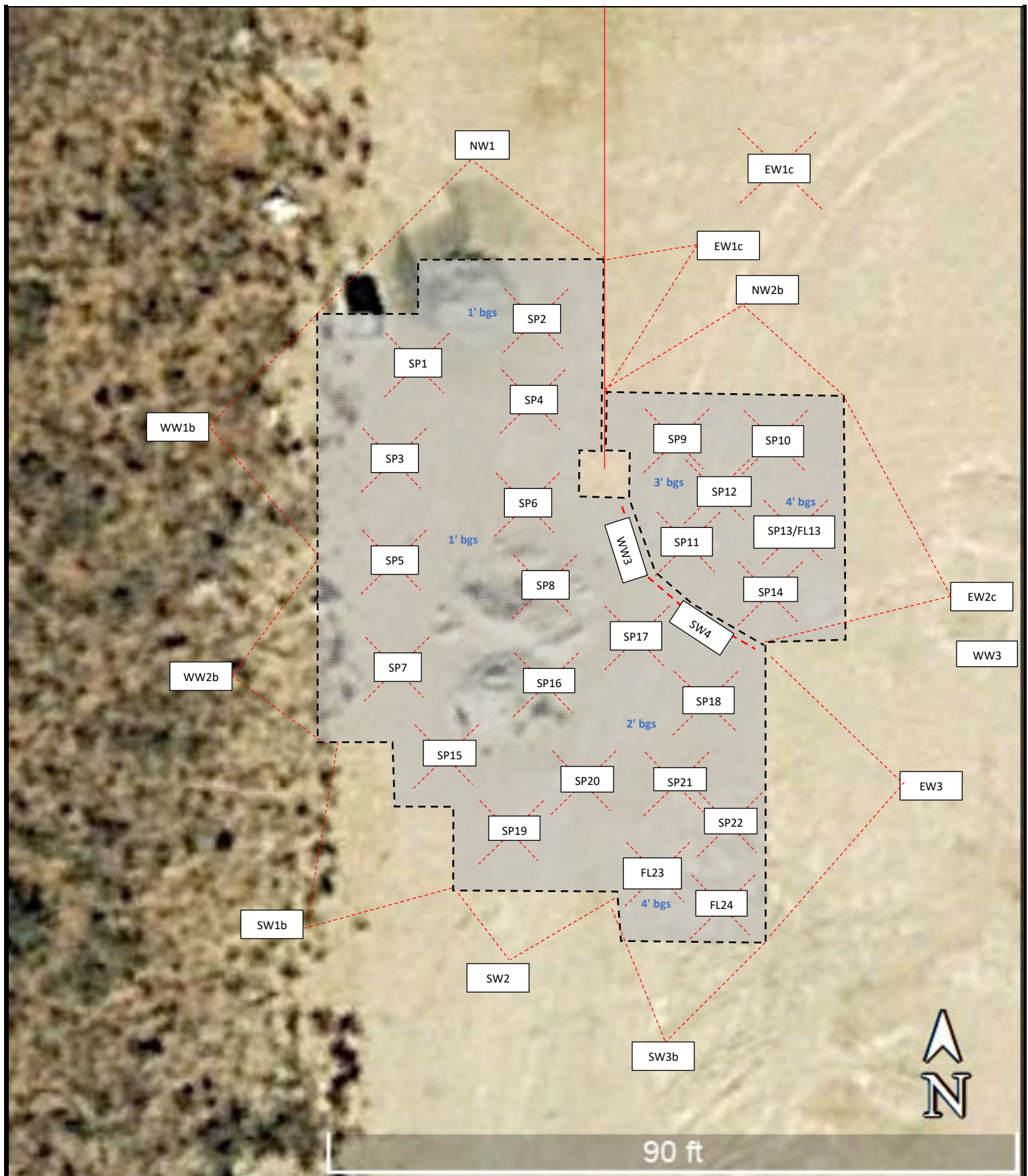
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Checked: jwl

Date: 8/21/20

Figure 3

Site and Sample Location Map



Legend:

- Sample Point
- Excavated Area
- Pipeline

Figure 3

Site and Sample Location Map
 COG Operating, LLC
 Boone 16 State Com 2H
 GPS: 32.472146, -103.57542
 Lea County



Drafted: mag

Checked: jwl

Date: 9/3/20

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

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL
COG Operating, LLC
Boone 16 State Com 2H
NMOCD Ref. #: pending

NMOCD Closure Criteria				10	50	-	-	1000	-	2500	20000
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
SP1 @ 1'	8/11/2020	1'	In-Situ	0.00569	0.0236	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02
SP2 @ 1'	8/11/2020	1'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	14.3
SP3 @ 1'	8/11/2020	1'	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	268
SP4 @ 1'	8/11/2020	1'	In-Situ	<0.00199	<0.00199	<49.8	56.7	56.7	<49.8	56.7	18.3
SP5 @ 1'	8/11/2020	1'	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	158
SP6 @ 1'	8/11/2020	1'	In-Situ	<0.00202	0.00474	<49.9	<49.9	<49.9	<49.9	<49.9	71.8
SP7 @ 1'	8/11/2020	1'	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	44.7
SP8 @ 1'	8/11/2020	1'	In-Situ	<0.00200	0.00441	<50.0	<50.0	<50.0	<50.0	<50.0	23.0
SP9 @ 3'	8/11/2020	3'	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	479
SP10 @ 4'	8/11/2020	4'	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	171
SP11 @ 4'	8/11/2020	4'	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	666
SP12 @ 4'	8/11/2020	4'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	83.5
SP13 @ 3'	8/11/2020	3'	Excavated	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	858
SP14 @ 4'	8/11/2020	4'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	382
SP15 @ 2'	8/11/2020	2'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	384
SP16 @ 2'	8/11/2020	2'	In-Situ	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	226
SP17 @ 2'	8/11/2020	2'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	296
SP18 @ 2'	8/11/2020	2'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	341
SP19 @ 2'	8/11/2020	2'	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	332
SP20 @ 2'	8/11/2020	2'	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	17.9
SP21 @ 2'	8/11/2020	2'	In-Situ	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	219
SP22 @ 2'	8/11/2020	2'	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	481
NW1	8/11/2020	NA	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	133
NW2B	8/11/2020	NA	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	107
WW1	8/11/2020	NA	Excavated	<0.00200	<0.00200	<49.9	160	160	57.3	217	379
WW2B	8/11/2020	NA	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	22.8
SW1	8/11/2020	NA	Excavated	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	516
FL 23@4'	8/12/2020	4'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	465
FL 24@2'	8/12/2020	2'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	76.1
SW1B	8/12/2020	NA	In-Situ	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	99.8
SW2	8/12/2020	NA	In-Situ	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	202
SW3	8/12/2020	NA	Excavated	<0.0105	<0.0105	<50.0	281	281	<50.0	281	120
SW4	8/12/2020	NA	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	418
EW1C	8/12/2020	NA	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	135
EW2C	8/12/2020	NA	In-Situ	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	142
EW3	8/12/2020	NA	In-Situ	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	125
WW3	8/12/2020	NA	In-Situ	<0.0370	<0.0370	<50.3	<50.3	<50.3	<50.3	<50.3	151

NOTES:

- = Sample not analyzed for that constituent.

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

TABLE 1
CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL
COG Operating, LLC
Boone 16 State Com 2H
NMOCD Ref. #: pending

NMOCD Closure Criteria				10	50	-	-	1000	-	2500	20000
NMOCD Reclamation Standard				10	50	-	-	-	-	100	600
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
FL13 @ 4'	8/14/2020	4'	In-Situ	-	-	-	-	-	-	-	13.7
WW1b	8/14/2020	NA	In-Situ	-	-	<50.1	<50.1	<50.1	<50.1	<50.1	-
SW3b	8/14/2020	NA	In-Situ	-	-	<50.2	<50.2	<50.2	<50.2	<50.2	-

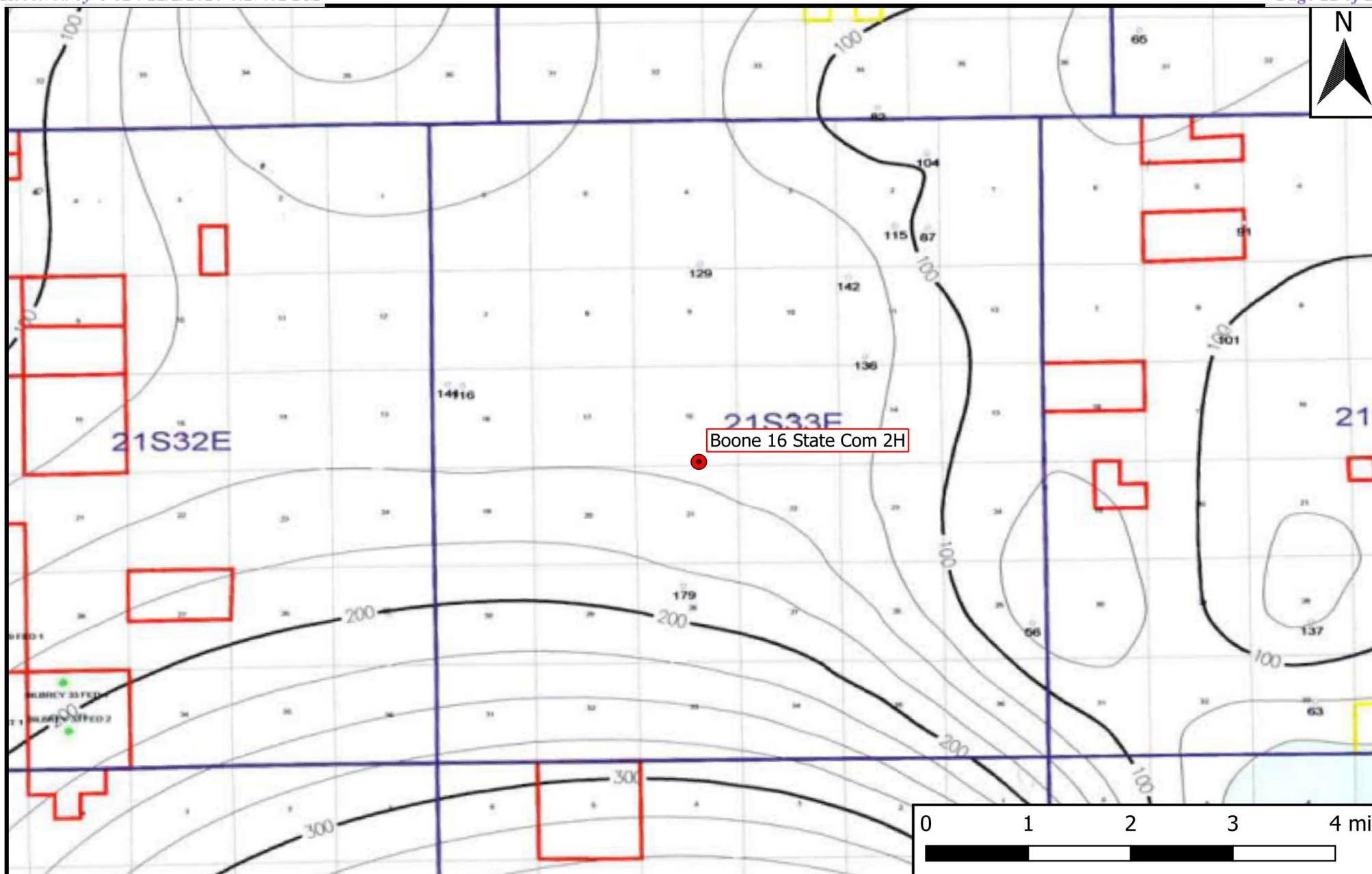
NOTES:

- = Sample not analyzed for that constituent.

Bold text denotes a concentration that exceeds the NMOCD Closure Criteria

Appendix A

Depth to Groundwater Information



Legend

● Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
 COG Operating, LLC
 Boone 16 State Com 2H
 GPS: 32.472146, -103.57542
 Lea County

eTECH
 Environmental & Safety Solutions, Inc.

Drafted: mag

Checked: jwl

Date: 8/21/20



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

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

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tw	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
CP 00601 POD1		CP	LE	2	1	28	21S	33E		633502	3591791*	1910	223		
CP 01349 POD1		CP	LE	2	3	1	27	21S	33E	634782	3591569	2284	1188	572	616
CP 01357 POD1		CP	LE	4	3	1	27	21S	33E	634782	3591347	2490	1286	578	708
CP 01355 POD1		CP	LE	2	1	3	27	21S	33E	634773	3591061	2755	1192	582	610

Average Depth to Water: **577 feet**

Minimum Depth: **572 feet**

Maximum Depth: **582 feet**

Record Count: 4

UTM NAD83 Radius Search (in meters):

Easting (X): 633870.98

Northing (Y): 3593665.11

Radius: 3220

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

8/21/20 11:02 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 00601	POD1	2	1	28	21S	33E	633502	3591791*	

x

Driller License: 122 **Driller Company:** UNKNOWN**Driller Name:** UNKNOWN, UNKNOWN

Drill Start Date:	Drill Finish Date:	12/31/1952	Plug Date:
Log File Date:	PCW Rcv Date:		Source: Shallow
Pump Type:	Pipe Discharge Size:		Estimated Yield: 3 GPM
Casing Size: 6.63	Depth Well: 223 feet		Depth Water:

x

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

8/21/20 11:02 AM

POINT OF DIVERSION SUMMARY



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
SANTA FE, NM

2014 SEP 10 PM 2:15

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) CP-1349 (Tyler #1) *** REVISED 09/09/14 ***				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) Merchants/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) 575-398-2424			
	WELL OWNER MAILING ADDRESS P. O. Box 692				CITY Tatum		STATE NM	ZIP 88267
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 27	SECONDS 11.3 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
LONGITUDE 103 33 57.7 W DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE1/4SW1/4NW1/4 Section 27, Township 21 South, Range 33 East on Merchants Livestock Land								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD 421		NAME OF LICENSED DRILLER Corky Glenn		NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.			
	DRILLING STARTED 07/12/14	DRILLING ENDED 07/18/14	DEPTH OF COMPLETED WELL (FT) 1,188'		BORE HOLE DEPTH (FT) 1,188'	DEPTH WATER FIRST ENCOUNTERED (FT) 990'		
	COMPLETED WELL IS: ☒ ARTESIAN ☐ DRY HOLE ☐ SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) 572'		
	DRILLING FLUID: ☒ AIR ☒ MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: ☒ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0'	40'	20"	16"	None	15 1/2"	.250	
	0'	754'	14 3/4"	9 5/8"	Thread & Collar	8.921"	36 lbs.	none
	721'	1,188'	8 3/4"	7" (467' Total)	Thread & Collar	6.366"	23 lbs.	1/8"
			259.93' perforated					
			on bottom of liner					
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0'	40'	20"	Cemented	2 yds.	Top Pour		
	0	754'	14 3/4"	Float and shoe cemented to surface	777	Circulated		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1349	POD NUMBER	1	TRN NUMBER	548679
LOCATION	Exp1	215.33E.27.132			PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	4'	4'	Sand	☐ Y ☒ N	
	4'	19'	15'	Caliche	☐ Y ☒ N	
	19'	35'	16'	Sand & Clay	☐ Y ☒ N	
	35'	122'	87'	Red Clay	☐ Y ☒ N	
	122'	145'	23'	Sandy Red Clay	☐ Y ☒ N	
	145'	417'	272'	Red & Brown Clay	☐ Y ☒ N	
	417'	720'	303'	Brown & Red Shale (some clay)	☐ Y ☒ N	
	720'	742'	22'	Red, Brown & Blue Clay	☐ Y ☒ N	
	742'	753'	11'	Brown Shale & Brown Sandrock	☐ Y ☒ N	
	753'	805'	52'	Red & Blue Clay	☐ Y ☒ N	
	805'	837'	32'	Brown & Red Shale (some sandrock)	☐ Y ☒ N	
	837'	885'	48'	Brown Sandrock & Shale	☐ Y ☒ N	
	885'	990'	105'	Red & Brown Shale (some sandrock)	☐ Y ☒ N	
	990'	1188'	198'	Watersand (Brown Sandrock)	☒ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ☒ PUMP					TOTAL ESTIMATED	
☐ AIR LIFT ☐ BAILER ☐ OTHER - SPECIFY:					WELL YIELD (gpm):	
5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.				
	MISCELLANEOUS INFORMATION: 0' to 754' drilled with mud. 754' to 1,188' drilled with air and foam.					
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:					
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:					
	 SIGNATURE OF DRILLER / PRINT SIGNED NAME					9/9/14 DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1349	POD NUMBER	1	TRN NUMBER	548679
LOCATION	215.33E.27.132				PAGE 2 OF 2



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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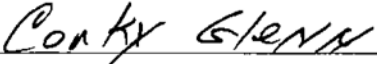
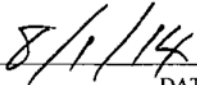
STATE ENGINEER OFFICE
POSWELL, NEW MEXICO
2014 AUG -4 AM 10:48

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) CP - 1349 (Tyler #1)				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) Merchants Livestock/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) (575)398-2424			
	WELL OWNER MAILING ADDRESS P.O. Box 692				CITY Tatum		STATE NM	ZIP 88267
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 27	SECONDS 11.3 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
		LONGITUDE 103	33	37.7 W				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE/SW/NW Sec. 27, T21S, R33E on Merchants Livestock Land								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD 421		NAME OF LICENSED DRILLER Corky Glenn			NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.		
	DRILLING STARTED 7/12/14	DRILLING ENDED 7/18/14	DEPTH OF COMPLETED WELL (FT) 1188'		BORE HOLE DEPTH (FT) 1188'	DEPTH WATER FIRST ENCOUNTERED (FT) 990'		
	COMPLETED WELL IS: ☒ ARTESIAN ☐ DRY HOLE ☐ SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: ☒ AIR ☐ MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: ☒ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0'	40'	20"	16"	none	15 1/2'	.250	
	0'	754'	14 3/4"	9 5/8"	Thread and collar	.352	36 lbs.	none
	721'	1188'	8 3/4"	7"	Thread and collar	6.5"	23 lbs.	1/8"
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0'	40'	20"	Cemented	2 yds.	Top Pour		
	0'	754'	14 3/4"	Float and shoe cemented to surface	740	Circulated		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER CP-1349	POD NUMBER 1	TRN NUMBER 548679
LOCATION 21S.33E.27.231		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0'	4'	4'	Sand	☐ Y ☒ N	
	4'	19'	15'	Caleche	☐ Y ☒ N	
	19'	35'	16'	Sand & Clay	☐ Y ☒ N	
	35'	122'	87'	Red Sand	☐ Y ☒ N	
	122'	145'	23'	Sandy Red Clay	☐ Y ☒ N	
	145'	417'	272'	Red & Brown Clay	☐ Y ☒ N	
	417'	720'	303'	Brown & Red Shale (some clay)	☐ Y ☒ N	
	720'	742'	22'	Red, Brown & Blue Clay	☐ Y ☒ N	
	742'	753'	11'	Brown Shale & Brown Sandrock	☐ Y ☒ N	
	753'	805'	52'	Red & Blue Clay	☐ Y ☒ N	
	805'	837'	32'	Brown & Red Shale (some sandrock)	☐ Y ☒ N	
	837'	885'	48'	Brown Sandrock & Shale	☐ Y ☒ N	
	855'	990'	105'	Red & Brown Shale (some sandrock)	☐ Y ☒ N	
	990'	1188'	198'	Watersand(Brown sandrock)	☒ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ☒ PUMP					TOTAL ESTIMATED WELL YIELD (gpm): 50	
☐ AIR LIFT ☐ BAILER ☐ OTHER - SPECIFY:						
5. TEST; RIG SUPERVISION	WELL TEST TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.					
	MISCELLANEOUS INFORMATION:					
	0' to 754' drilled with mud. 754' to 1188' drilled with air and foam.					
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:						
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:					
	  					
SIGNATURE OF DRILLER / PRINT SIGNEE NAME						DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER

CP-1349

POD NUMBER

1

TRN NUMBER

548479

LOCATION

215. 33E. 27. 231

PAGE 2 OF 2



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE
SASWELL, NEW MEXICO

2014 SEP 10 PM 2:15

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) CP-1355 (East Standard South) *** Revised 09/09/14 ***				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) Merchants/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) 575-398-2424			
	WELL OWNER MAILING ADDRESS P. O. Box 692				CITY Tatum		STATE NM	ZIP 88267
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 26	SECONDS 54.8 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
	LONGITUDE 103	33	58.3 W					
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE NE1/4NW1/4SW1/4 Section 27, Township 21 South, Range 33 East on Merchants Livestock Land								
2. DRILLING & CASING INFORMATION	LICENSE NUMBER WD 421		NAME OF LICENSED DRILLER Corky Glenn			NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.		
	DRILLING STARTED 07/22/14	DRILLING ENDED 07/29/14	DEPTH OF COMPLETED WELL (FT) 1,192'	BORE HOLE DEPTH (FT) 1,192'	DEPTH WATER FIRST ENCOUNTERED (FT) 925'			
	COMPLETED WELL IS: ☒ ARTESIAN ☐ DRY HOLE ☐ SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 582'			
	DRILLING FLUID: ☒ AIR ☐ MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: ☒ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER - SPECIFY:							
	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	0'	40'	20"	16"	None	15 1/2"	.250	
	0'	757'	14 3/4"	9 5/8"	Thread & Collar	8.921"	36 lbs.	none
	690'	1,192'	8 3/4"	7" (502.14' Total) 317.96 perforated on bottom of liner	Thread & Collar	6.366"	23 lbs.	1/8"
3. ANNULAR MATERIAL	DEPTH (feet bgl) FROM TO		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	0'	40'	20"	Cemented	2 yds.	Top Pour		
	0	757'	14 3/4"	Float and shoe cemented to surface	962	Circulated		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER CP-1355	POD NUMBER 1	TRN NUMBER 549450
LOCATION Expl	215.33E.27.312	
		PAGE 1 OF 2

[illegible]

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER CP-1355

POD NUMBER /

TRN NUMBER 549450

LOCATION

 $215.33 \leq 27.312$

PAGE 2 OF 2



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

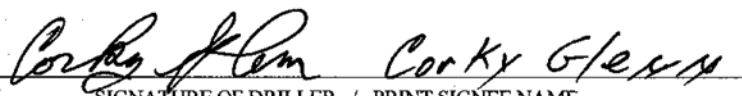
www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NUMBER (WELL NUMBER) CP - 1355 East Standard (South)				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) Merchants Livestock/Glenn's Water Well Service, Inc.				PHONE (OPTIONAL) (575)398-2424			
	WELL OWNER MAILING ADDRESS P.O. Box 692				CITY Tatum			
					STATE NM			
2. DRILLING & CASING INFORMATION	WELL LOCATION (FROM GPS)		DEGREES 32	MINUTES 26	SECONDS 54.8	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND	
			LONGITUDE 103	33	58.3	W	* DATUM REQUIRED: WGS 84	
	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE							
	NE/NW/SW Sec. 27, T21S, R33E on Merchants Livestock Land							
3. ANNULAR MATERIAL	LICENSE NUMBER WD 421		NAME OF LICENSED DRILLER Corky Glenn				NAME OF WELL DRILLING COMPANY Glenn's Water Well Service, Inc.	
	DRILLING STARTED 7/29/14		DRILLING ENDED 8/2/14		DEPTH OF COMPLETED WELL (FT) 1192'		BORE HOLE DEPTH (FT) 1192'	
					DEPTH WATER FIRST ENCOUNTERED (FT) 925'			
	COMPLETED WELL IS: ☒ ARTESIAN ☐ DRY HOLE ☐ SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 582'			
	DRILLING FLUID: ☐ AIR ☐ MUD		ADDITIVES - SPECIFY:					
	DRILLING METHOD: ☒ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0'	40'	20"	16"	None	15 1/2"	.250	
	0'	757'	14 3/4"	9 5/8"	Thread and Collar	.352	36 lbs.	none
757'	1192'	8 3/4"	7"	Thread and Collar	6.5"	23 lbs.	1/8"	
DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT			
FROM	TO							
0'	40'	20"	Cemented	2 yds	Top Pour			
0'	757'	14 3/4"	Float and Shoe Cemented to Surface	1034	Circulated			

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1355	POD NUMBER	1	TRN NUMBER	54450
LOCATION	Exp	215.33E.27.312			PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0'	4'	4'	Soil	☐ Y ☒ N	
	4'	28'	24'	Caleche	☐ Y ☒ N	
	28'	120'	92'	Sand and Clay	☐ Y ☒ N	
	120'	260'	140'	Red Clay	☐ Y ☒ N	
	260'	757'	497'	Red and Brown Shale and Clay(some blue)	☐ Y ☒ N	
	757'	815'	58'	Red and Brown Shale	☐ Y ☒ N	
	815'	840'	25'	Blue Clay and Shale	☐ Y ☒ N	
	840'	925'	85'	Red and Brown Shale(some sandrock)	☐ Y ☒ N	
	925'	975'	50'	Watersand and Gravel	☒ Y ☐ N	
	975'	1185'	210'	Watersand(brown sandrock)	☒ Y ☐ N	
	1185'	1192'	7'	Red Shale	☐ Y ☒ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
					☐ Y ☐ N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ☒ PUMP					TOTAL ESTIMATED WELL YIELD (gpm): 50	
☐ AIR LIFT ☐ BAILER ☐ OTHER - SPECIFY:						
5. TEST, RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.				
	MISCELLANEOUS INFORMATION:					
	0' to 757' drilled with mud. 757' to 1192' drilled with air and foam.					
PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:						
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:					
	 SIGNATURE OF DRILLER / PRINT SIGNED NAME					8/7/14 DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1355	POD NUMBER	1	TRN NUMBER	549450
LOCATION	Exp1	215.33E. 27-312			PAGE 2 OF 2



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 01349 POD1		2 3 1 27 21S 33E	634782	3591569



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

Driller Name: GLENN, CLARK A."CORKY"

Drill Start Date: 07/12/2014	Drill Finish Date: 07/18/2014	Plug Date:
Log File Date: 08/04/2014	PCW Rcv Date: 04/27/2017	Source: Artesian
Pump Type: SUBMER	Pipe Discharge Size: 3	Estimated Yield:
Casing Size: 7.00	Depth Well: 1188 feet	Depth Water: 572 feet

Water Bearing Stratifications:	Top	Bottom	Description
	990	1188	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	721	1188

Meter Number: 18275	Meter Make: BLANCETT
Meter Serial Number: 092 413 719	Meter Multiplier: 100.0000
Number of Dials: 9	Meter Type: Diversion
Unit of Measure: Barrels 42 gal.	Return Flow Percent:
Usage Multiplier:	Reading Frequency: Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
06/02/2015	2015	616318	A	ap	beginning water report	0
06/27/2015	2015	654758	A	ap		49.547
07/31/2015	2015	654758	A	ap		0
08/31/2015	2015	658147	A	ap		4.368
09/30/2015	2015	658147	A	ap		0
10/31/2015	2015	658147	A	ap		0
11/30/2015	2015	658147	A	ap		0
04/01/2016	2016	0	A	ap	meter was reset	0
04/30/2016	2016	56	A	ap		0.072
06/30/2016	2016	45448	A	ap		58.507
07/27/2016	2016	93651	A	ap		62.130
08/04/2016	2016	0	A	ap		0
08/04/2016	2016	93651	A	ap	replacing with new meter	0
09/01/2016	2016	59651	A	ap		768.861
09/30/2016	2016	59685	A	ap		0.438
10/31/2016	2016	59685	A	ap		0
11/29/2016	2016	123327	A	ap		820.303
12/31/2016	2016	202400	A	ap		1019.198
02/01/2017	2017	222525	A	ap		259.398
02/27/2017	2017	0	A	ap	reset meter again second time	0
02/27/2017	2017	227465	A	ap		63.673
03/01/2017	2017	4377	A	ap		56.417
03/31/2017	2017	63670	A	ap		764.247
05/01/2017	2017	110035	A	ap		597.614
05/31/2017	2017	121714	A	ap		150.534
07/31/2017	2017	179828	A	ap		749.050
10/31/2017	2017	212568	A	ap		421.997
11/30/2017	2017	212568	A	ap		0
11/30/2017	2017	0	A	ap	new meter	0

12/30/2017	2017	381606	A	ap	4911.968
01/30/2018	2018	437540	A	ap	727.628
02/28/2018	2018	489981	A	ap	675.929
03/30/2018	2018	547614	A	ap	742.851
04/30/2018	2018	599646	A	ap	670.657
06/01/2018	2018	653059	A	ap	688.458
06/29/2018	2018	705152	A	ap	671.444
07/31/2018	2018	740396	A	ap	454.271
08/30/2018	2018	797263	A	ap	732.977
09/30/2018	2018	846832	A	ap	638.911
11/30/2018	2018	954599	A	ap	1389.044
03/01/2019	2019	1133453	A	ap	2305.308
04/01/2019	2019	1176619	A	ap	556.381
05/01/2019	2019	1217687	A	ap	529.339
05/31/2019	2019	1300406	A	ap	1066.192
06/30/2019	2019	1360676	A	ap	776.840
10/31/2019	2019	1594691	A	ap	3016.296
06/01/2020	2020	1827737	A	RPT	3003.806

**YTD Meter Amounts:	Year	Amount
	2015	53.915
	2016	2729.509
	2017	7974.898
	2018	7392.170
	2019	8250.356
	2020	3003.806

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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 01355 POD1		2 1 3 27 21S 33E	634773	3591061



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

Driller Name: GLENN, CLARK A."CORKY"

Drill Start Date: 07/22/2014	Drill Finish Date: 07/29/2014	Plug Date:
Log File Date: 09/10/2014	PCW Rcv Date: 04/27/2017	Source: Artesian
Pump Type: SUBMER	Pipe Discharge Size: 3	Estimated Yield: 50 GPM
Casing Size: 6.37	Depth Well: 1192 feet	Depth Water: 582 feet

Water Bearing Stratifications:	Top	Bottom	Description
	925	975	Sandstone/Gravel/Conglomerate
	975	1185	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	690	1192

Meter Number: 18276	Meter Make: BLANCETT
Meter Serial Number: 092 413 721	Meter Multiplier: 100.0000
Number of Dials: 9	Meter Type: Diversion
Unit of Measure: Barrels 42 gal.	Return Flow Percent:
Usage Multiplier:	Reading Frequency: Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
06/03/2015	2015	551474	A	ap	beginning meter amt	0
06/27/2015	2015	578359	A	ap		346.530
07/31/2015	2015	578359	A	ap		0
08/31/2015	2015	578359	A	ap		0
09/30/2015	2015	578359	A	ap		0
10/28/2015	2015	578861	A	ap		6.470
11/30/2015	2015	590798	A	ap		153.860
04/28/2016	2016	784703	A	ap		2499.305
06/30/2016	2016	884243	A	ap		1283.004
07/27/2016	2016	939606	A	ap		713.592
09/01/2016	2016	995570	A	ap		721.338
09/30/2016	2016	1016127	A	ap		264.966
10/30/2016	2016	1043814	A	ap		356.867
11/29/2016	2016	1103209	A	ap		765.562
12/31/2016	2016	1156125	A	ap		682.052
02/01/2017	2017	1180595	A	ap		315.402
03/01/2017	2017	1190359	A	ap		125.851
03/31/2017	2017	1240617	A	ap		647.792
05/01/2017	2017	1286711	A	ap		594.121
05/31/2017	2017	1299115	A	ap		159.879
07/31/2017	2017	1383629	A	ap		1089.329
10/31/2017	2017	1493649	A	ap		1418.084
11/30/2017	2017	1561037	A	ap		868.586
12/30/2017	2017	1623261	A	ap		802.025
01/30/2018	2018	1649051	A	ap		332.416
02/28/2018	2018	1734092	A	ap		1096.121
03/30/2018	2018	1787360	A	ap		686.589
04/30/2018	2018	1839572	A	ap		672.978
06/01/2018	2018	1891342	A	ap		667.280

07/31/2018	2018	1999821	A	ap	638.344
08/30/2018	2018	2052087	A	ap	759.877
09/30/2018	2018	2084885	A	ap	673.674
11/30/2018	2018	2190614	A	ap	422.744
03/01/2019	2019	2346174	A	ap	1362.776
04/01/2019	2019	2379314	A	ap	2005.064
05/01/2019	2019	2412165	A	ap	427.152
05/31/2019	2019	2499795	A	ap	423.427
06/30/2019	2019	2533584	A	ap	1129.492
10/31/2019	2019	2741881	A	ap	435.517
06/01/2020	2020	2857702	A	RPT	2684.808
					1492.855

**YTD Meter Amounts:	Year	Amount
	2015	506.860
	2016	7286.686
	2017	6021.069
	2018	7312.799
	2019	7105.460
	2020	1492.855

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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 01357 POD1		4 3 1 27 21S 33E	634782	3591347 

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

Driller Name: GLENN, CLARK A."CORKY"

Drill Start Date: 08/16/2014	Drill Finish Date: 08/26/2014	Plug Date:
Log File Date: 09/10/2014	PCW Rcv Date: 04/27/2017	Source: Artesian
Pump Type: SUBMER	Pipe Discharge Size: 3	Estimated Yield:
Casing Size: 6.37	Depth Well: 1286 feet	Depth Water: 578 feet

Water Bearing Stratifications:	Top	Bottom	Description
	945	960	Sandstone/Gravel/Conglomerate
	960	1077	Shale/Mudstone/Siltstone
	1077	1215	Sandstone/Gravel/Conglomerate
	1215	1286	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	846	1286

Meter Number: 18278	Meter Make: BLANCETT
Meter Serial Number: 002 514 700	Meter Multiplier: 100.0000
Number of Dials: 9	Meter Type: Diversion
Unit of Measure: Barrels 42 gal.	Return Flow Percent:
Usage Multiplier:	Reading Frequency: Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
06/03/2015	2015	620282	A	ap	beginning meter reading	0
06/27/2015	2015	648079	A	ap		358.285
07/31/2015	2015	648079	A	ap		0
08/21/2015	2015	678838	A	ap		396.463
09/30/2015	2015	679417	A	ap		7.463
10/30/2015	2015	777255	A	ap		1261.066
11/30/2015	2015	798886	A	ap		278.809
04/30/2016	2016	984569	A	ap		2393.329
06/30/2016	2016	1124000	A	ap		1797.172
07/31/2016	2016	1199233	A	ap		969.703
09/01/2016	2016	1273938	A	ap		962.897
09/30/2016	2016	1304197	A	ap		390.018
10/31/2016	2016	1352466	A	ap		622.155
11/29/2016	2016	1416500	A	ap		825.355
12/31/2016	2016	1496320	A	ap		1028.826
02/01/2017	2017	1526044	A	ap		383.122
03/01/2017	2017	1526818	A	ap		9.976
03/31/2017	2017	1549606	A	ap		293.722
05/01/2017	2017	1596745	A	ap		607.590
05/31/2017	2017	1609365	A	ap		162.663
07/31/2017	2017	1675457	A	ap		851.881
10/31/2017	2017	1782654	A	ap		1381.697
11/30/2017	2017	1866815	A	ap		1084.779
12/30/2017	2017	1939812	A	ap		940.882
01/30/2018	2018	2006016	A	ap		853.325
02/28/2018	2018	2071063	A	ap		838.412
03/30/2018	2018	2134697	A	ap		820.199

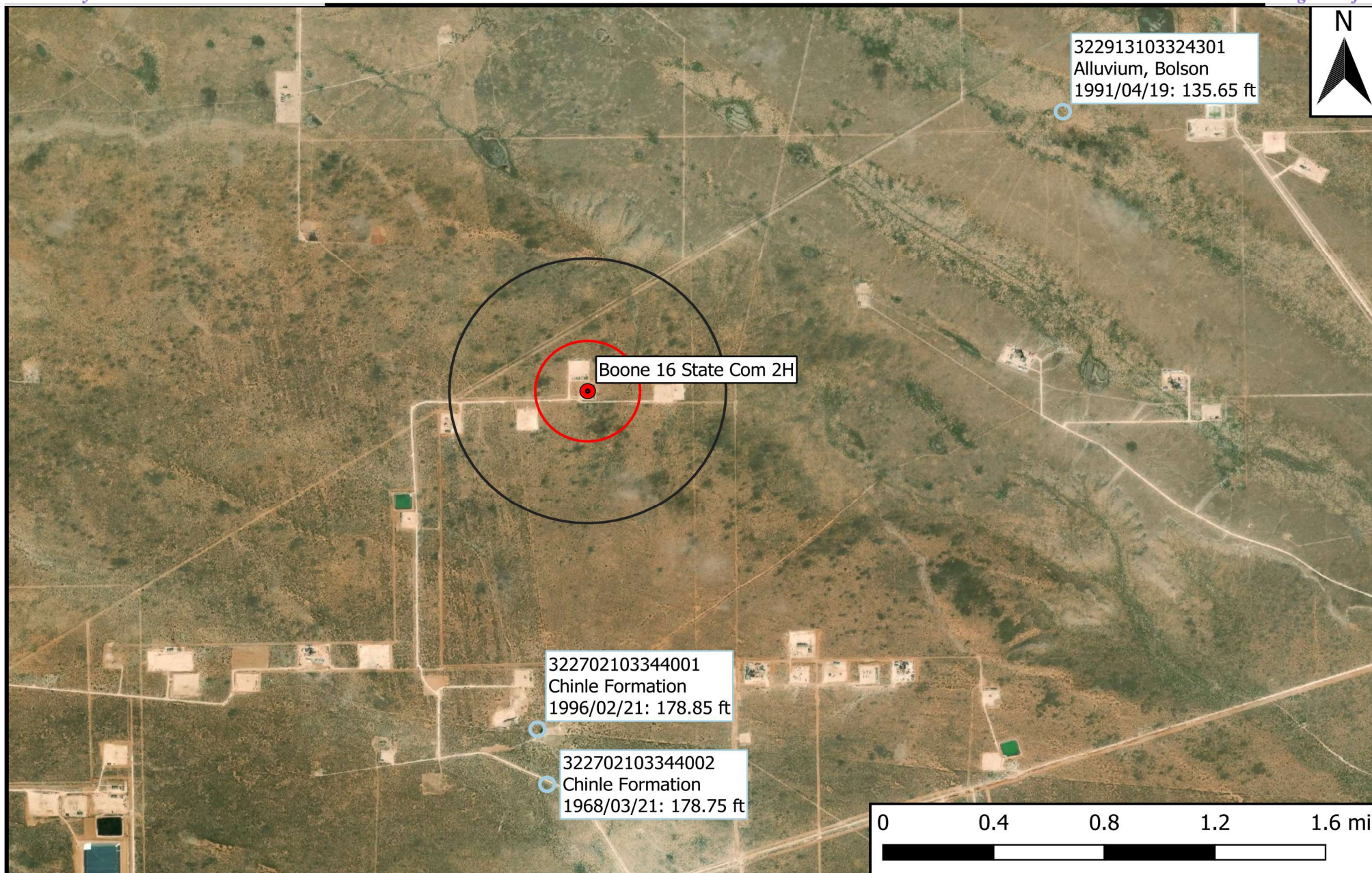
06/01/2018	2018	2264810	A	ap	817.222
06/01/2018	2018	2264810	A	ap	859.847
06/29/2018	2018	2327836	A	ap	812.363
07/31/2018	2018	2408117	A	ap	1034.768
08/30/2018	2018	2477917	A	ap	899.675
09/30/2018	2018	2536539	A	ap	755.598
11/30/2018	2018	2614905	A	ap	1010.085
03/01/2019	2019	2810937	A	ap	2526.721
04/01/2019	2019	2854901	A	ap	566.666
05/01/2019	2019	2897885	A	ap	554.035
05/31/2019	2019	2984380	A	ap	1114.862
06/30/2019	2019	3027905	A	ap	561.008
10/31/2019	2019	3279628	A	ap	3244.540
06/01/2020	2020	3474270	A	RPT	2508.804

**YTD Meter Amounts:	Year	Amount
	2015	2302.086
	2016	8989.455
	2017	5716.312
	2018	8701.494
	2019	8567.832
	2020	2508.804

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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
COG Operating, LLC
Boone 16 State Com 2H
GPS: 32.472146, -103.57542
Lea County



Drafted: mag

Checked: jwl

Date: 8/21/20



National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

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Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 322702103344001

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

USGS 322702103344001 21S.33E.28.12443

Lea County, New Mexico
Latitude 32°27'13", Longitude 103°34'42" NAD27
Land-surface elevation 3,688.00 feet above NGVD29
The depth of the well is 224 feet below land surface.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1971-02-04			D178.62			2			U		UA
1972-09-22			D178.60			2			U		UA
1976-12-16			D178.86			2			U		UA
1981-03-10			D184.67			2			U		UA
1986-03-20			D179.24			2			U		UA
1991-04-19			D179.10			2			U		UA
1996-02-21			D178.85			2			S		UA

Explanation		
Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels

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



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

Page Last Modified: 2020-08-21 12:59:10 EDT

0.27 0.26 nadww02



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USGS Water Resources

Data Category:

Groundwater

Geographic Area:

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Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 322702103344002

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

USGS 322702103344002 21S.33E.28.12443A

Lea County, New Mexico
Latitude 32°27'02", Longitude 103°34'40" NAD27
Land-surface elevation 3,680 feet above NAVD88
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

Table of data

Tab-separated data

Graph of data

Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1968-03-21		D	178.75			2		U		U	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 322913103324301

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

USGS 322913103324301 21S.33E.11.34313

Lea County, New Mexico
Latitude 32°29'13", Longitude 103°32'43" NAD27
Land-surface elevation 3,800 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

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1981-03-11		D	135.60			2		U		U	A
1986-03-21		D	135.82			2		U		U	A
1991-04-19		D	135.65			2		U		U	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.25 0.23 nadww02

Appendix B

Field Data and Soil Profile Logs

Sample Log

Date:

8-10-20

Project: Boone 16 State Com 2H

Project Number: 12881

Latitude: 32.472146

Longitude: -103.57542

[illegible]

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas



Sample Log

Project: Boone 16 State Com 24

Date: 8.11.20

Project Number: 12881

Latitude: 32.472146

Longitude: -103.57542

Sample ID	PID/Odor	Chloride Conc.	GPS
Pasture SP1@6"	none	112	
Pasture SP2@6"	none	348	
Pasture SP3@6"	none	7112	
Pasture SP4@6"	none	7112	
SP1@1'	none	568	
SP2@1'	none	7112	
SP3@1'	none	312	
SP4@1'	none	184	
SP5@1'	none	312	
SP6@1'	none	112	
SP7@1'	none	7112	
SP8@1'	none	7112	
NW1	none	7112	
NW2	none	732	
EW1	none	1156	
EW2	none	928	
WW1	none	276	
WW2	none	860	
SP9@3'	none	312	
SP10@3'	none	1156	
SP11@3'	none	620	
SP12@3'	none	1244	
SP13@3'	none	568	
SP14@3'	none	2388	
NW2B	none	184	
EW1B	none	1776	
EW2B	none	860	
SP10@4'	none	184	
SP11@4'	none	568	
SP12@4'	none	184	
SP14@4'	none	244	
SP15@2'	none	348	
P16@2'	none	212	
P17@2'	none	568	
P18@2'	none	568	
P19@2'	none	476	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

[Handwritten signature]

Sample Log

Project: Boone / b State com 2H

Date: 8-11-20

Project Number: 12881

Latitude: 32.47244

Longitude: -103.57542

[illegible]

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas



Soil Profile

Date: 8/10/20

Project: Boone 16 State Com 2H
Project Number: 12881 Latitude: 32.472146 Longitude: -103.57542

Depth (ft. bgs)	Description
1	Caliche Pav (compacted)
2	↓ Rocky caliche
3	↓
4	↓ Soft, red dirt
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
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Appendix C

Laboratory Analytical Reports

Certificate of Analysis Summary 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Boone 16 State Com 2H

Project Id: 12881
Contact: PM
Project Location: Lea County, NM

Date Received in Lab: Wed 08.12.2020 11:20
Report Date: 08.13.2020 15:27
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669781-001	669781-002	669781-003	669781-004	669781-005	669781-006
	<i>Field Id:</i>	SP1 @ 1'	SP2 @ 1'	SP3 @ 1'	SP4 @ 1'	SP5 @ 1'	SP6 @ 1'
	<i>Depth:</i>	1- ft	1- ft	1- ft	1- ft	1- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.12.2020 13:00	08.12.2020 13:00	08.12.2020 13:00	08.12.2020 13:00	08.12.2020 13:00	08.12.2020 13:00
	<i>Analyzed:</i>	08.12.2020 23:13	08.12.2020 23:34	08.12.2020 23:54	08.13.2020 01:17	08.13.2020 01:37	08.13.2020 01:58
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		0.00569 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202
Toluene		0.0179 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202	0.00474 0.00202
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202
m,p-Xylenes		<0.00404 0.00404	<0.00401 0.00401	<0.00402 0.00402	<0.00398 0.00398	<0.00403 0.00403	<0.00404 0.00404
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202	<0.00202 0.00202
Total BTEX		0.0236 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202	0.00474 0.00202
Chloride by EPA 300	<i>Extracted:</i>	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10
	<i>Analyzed:</i>	08.12.2020 13:30	08.12.2020 13:50	08.12.2020 13:56	08.12.2020 14:02	08.12.2020 14:09	08.12.2020 14:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.02 5.02	14.3 4.98	268 5.04	18.3 4.96	158 4.99	71.8 4.95
TPH by SW8015 Mod	<i>Extracted:</i>	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00
	<i>Analyzed:</i>	08.12.2020 13:00	08.12.2020 14:05	08.12.2020 14:27	08.12.2020 14:48	08.12.2020 15:10	08.12.2020 15:32
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	56.7 49.8	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	56.7 49.8	<50.0 50.0	<49.9 49.9

BRL - Below Reporting Limit

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Certificate of Analysis Summary 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Boone 16 State Com 2H

Project Id: 12881
Contact: PM
Project Location: Lea County, NM

Date Received in Lab: Wed 08.12.2020 11:20
Report Date: 08.13.2020 15:27
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669781-007	669781-008	669781-009	669781-010	669781-011	669781-012
	<i>Field Id:</i>	SP7 @ 1'	SP8 @ 1'	SP9 @ 3'	SP10 @ 4'	SP11 @ 4'	SP12 @ 4'
	<i>Depth:</i>	1- ft	1- ft	3- ft	4- ft	4- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.12.2020 13:00	08.12.2020 13:00	08.12.2020 13:00	08.12.2020 13:00	08.12.2020 13:00	08.12.2020 13:00
	<i>Analyzed:</i>	08.13.2020 02:18	08.13.2020 02:39	08.13.2020 02:59	08.13.2020 03:20	08.13.2020 03:40	08.13.2020 04:01
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00200 0.00200	0.00441 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00401 0.00401	<0.00401 0.00401	<0.00402 0.00402	<0.00401 0.00401	<0.00398 0.00398	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	0.00441 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10
	<i>Analyzed:</i>	08.12.2020 14:34	08.12.2020 14:40	08.12.2020 14:47	08.12.2020 14:53	08.12.2020 14:59	08.12.2020 15:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		44.7 4.95	23.0 4.98	479 5.05	171 5.00	666 5.05	83.5 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00
	<i>Analyzed:</i>	08.12.2020 15:54	08.12.2020 16:16	08.12.2020 16:38	08.12.2020 17:00	08.12.2020 17:44	08.12.2020 18:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Total TPH		<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9

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Certificate of Analysis Summary 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Boone 16 State Com 2H

Project Id: 12881
Contact: PM
Project Location: Lea County, NM

Date Received in Lab: Wed 08.12.2020 11:20
Report Date: 08.13.2020 15:27
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669781-013	669781-014	669781-015	669781-016	669781-017	669781-018
	<i>Field Id:</i>	SP13 @ 3'	SP14 @ 4'	SP15 @ 2'	SP16 @ 2'	SP17 @ 2'	SP18 @ 2'
	<i>Depth:</i>	3- ft	4- ft	2- ft	2- ft	2- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.12.2020 13:00	08.12.2020 14:00	08.12.2020 14:00	08.12.2020 14:00	08.12.2020 14:00	08.12.2020 14:00
	<i>Analyzed:</i>	08.13.2020 04:21	08.12.2020 22:55	08.12.2020 23:15	08.12.2020 23:36	08.12.2020 23:56	08.13.2020 00:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00403 0.00403	<0.00399 0.00399	<0.00399 0.00399	<0.00402 0.00402	<0.00400 0.00400	<0.00400 0.00400
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 13:10
	<i>Analyzed:</i>	08.12.2020 15:25	08.12.2020 15:44	08.12.2020 15:50	08.12.2020 15:56	08.12.2020 16:03	08.12.2020 16:09
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		858 4.95	382 5.02	384 4.99	226 5.00	296 5.00	341 5.00
TPH by SW8015 Mod	<i>Extracted:</i>	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 12:00
	<i>Analyzed:</i>	08.12.2020 18:27	08.12.2020 18:49	08.12.2020 19:11	08.12.2020 19:33	08.12.2020 19:54	08.12.2020 20:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0

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Certificate of Analysis Summary 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Boone 16 State Com 2H

Project Id: 12881
Contact: PM
Project Location: Lea County, NM

Date Received in Lab: Wed 08.12.2020 11:20
Report Date: 08.13.2020 15:27
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669781-019	669781-020	669781-021	669781-022	669781-023	669781-024
	<i>Field Id:</i>	SP19 @ 2'	SP20 @ 2'	SP21 @ 2'	SP22 @ 2'	NW1	NW2B
	<i>Depth:</i>	2- ft	2- ft	2- ft	2- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.12.2020 14:00	08.12.2020 14:00	08.12.2020 14:00	08.12.2020 14:00	08.12.2020 14:00	08.12.2020 14:00
	<i>Analyzed:</i>	08.13.2020 00:37	08.13.2020 00:57	08.13.2020 01:18	08.13.2020 01:38	08.13.2020 01:58	08.13.2020 03:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00397 0.00397	<0.00397 0.00397	<0.00397 0.00397	<0.00398 0.00398	<0.00400 0.00400	<0.00398 0.00398
o-Xylene		<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	08.12.2020 13:10	08.12.2020 13:10	08.12.2020 14:10	08.12.2020 14:10	08.12.2020 14:10	08.12.2020 14:10
	<i>Analyzed:</i>	08.12.2020 16:15	08.12.2020 16:22	08.12.2020 14:38	08.12.2020 14:54	08.12.2020 14:59	08.12.2020 15:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		332 5.03	17.9 4.96	219 5.00	481 4.95	133 5.02	107 4.99
TPH by SW8015 Mod	<i>Extracted:</i>	08.12.2020 12:00	08.12.2020 12:00	08.12.2020 17:00	08.12.2020 17:00	08.12.2020 17:00	08.12.2020 17:00
	<i>Analyzed:</i>	08.12.2020 20:37	08.12.2020 20:59	08.13.2020 01:07	08.13.2020 01:26	08.13.2020 01:45	08.13.2020 02:04
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<49.8 49.8	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<49.8 49.8	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<49.8 49.8	<50.0 50.0
Total TPH		<50.0 50.0	<49.9 49.9	<49.8 49.8	<49.9 49.9	<49.8 49.8	<50.0 50.0

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Certificate of Analysis Summary 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Boone 16 State Com 2H

Project Id: 12881
Contact: PM
Project Location: Lea County, NM

Date Received in Lab: Wed 08.12.2020 11:20
Report Date: 08.13.2020 15:27
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669781-025	669781-026	669781-027			
	<i>Field Id:</i>	WW1	WW2B	SW1			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	08.11.2020 00:00	08.11.2020 00:00	08.11.2020 00:00			
BTEX by EPA 8021B	<i>Extracted:</i>	08.12.2020 14:00	08.12.2020 14:00	08.12.2020 14:00			
	<i>Analyzed:</i>	08.13.2020 03:42	08.13.2020 04:03	08.13.2020 04:23			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00402 0.00402			
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Chloride by EPA 300	<i>Extracted:</i>	08.12.2020 14:10	08.12.2020 14:10	08.12.2020 14:10			
	<i>Analyzed:</i>	08.12.2020 15:10	08.12.2020 15:26	08.12.2020 15:31			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		379 5.00	22.8 5.00	516 5.04			
TPH by SW8015 Mod	<i>Extracted:</i>	08.12.2020 17:00	08.12.2020 17:00	08.12.2020 17:00			
	<i>Analyzed:</i>	08.13.2020 02:22	08.13.2020 02:41	08.13.2020 03:00			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0			
Diesel Range Organics (DRO)		160 49.9	<49.8 49.8	<50.0 50.0			
Motor Oil Range Hydrocarbons (MRO)		57.3 49.9	<49.8 49.8	<50.0 50.0			
Total TPH		217 49.9	<49.8 49.8	<50.0 50.0			

BRL - Below Reporting Limit

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



Analytical Report 669781

for

Etech Environmental & Safety Solution, Inc

Project Manager: PM

Boone 16 State Com 2H

12881

08.13.2020

Collected By: Client



1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.13.2020

Project Manager: **PM**

Etech Environmental & Safety Solution, Inc

P.O. Box 62228

Midland, TX 79711

Reference: Eurofins Xenco, LLC Report No(s): **669781**

Boone 16 State Com 2H

Project Address: Lea County, NM

PM :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 669781. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 669781 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP1 @ 1'	S	08.11.2020 00:00	1 ft	669781-001
SP2 @ 1'	S	08.11.2020 00:00	1 ft	669781-002
SP3 @ 1'	S	08.11.2020 00:00	1 ft	669781-003
SP4 @ 1'	S	08.11.2020 00:00	1 ft	669781-004
SP5 @ 1'	S	08.11.2020 00:00	1 ft	669781-005
SP6 @ 1'	S	08.11.2020 00:00	1 ft	669781-006
SP7 @ 1'	S	08.11.2020 00:00	1 ft	669781-007
SP8 @ 1'	S	08.11.2020 00:00	1 ft	669781-008
SP9 @ 3'	S	08.11.2020 00:00	3 ft	669781-009
SP10 @ 4'	S	08.11.2020 00:00	4 ft	669781-010
SP11 @ 4'	S	08.11.2020 00:00	4 ft	669781-011
SP12 @ 4'	S	08.11.2020 00:00	4 ft	669781-012
SP13 @ 3'	S	08.11.2020 00:00	3 ft	669781-013
SP14 @ 4'	S	08.11.2020 00:00	4 ft	669781-014
SP15 @ 2'	S	08.11.2020 00:00	2 ft	669781-015
SP16 @ 2'	S	08.11.2020 00:00	2 ft	669781-016
SP17 @ 2'	S	08.11.2020 00:00	2 ft	669781-017
SP18 @ 2'	S	08.11.2020 00:00	2 ft	669781-018
SP19 @ 2'	S	08.11.2020 00:00	2 ft	669781-019
SP20 @ 2'	S	08.11.2020 00:00	2 ft	669781-020
SP21 @ 2'	S	08.11.2020 00:00	2 ft	669781-021
SP22 @ 2'	S	08.11.2020 00:00	2 ft	669781-022
NW1	S	08.11.2020 00:00		669781-023
NW2B	S	08.11.2020 00:00		669781-024
WW1	S	08.11.2020 00:00		669781-025
WW2B	S	08.11.2020 00:00		669781-026
SW1	S	08.11.2020 00:00		669781-027

**CASE NARRATIVE****Client Name: Etech Environmental & Safety Solution, Inc****Project Name: Boone 16 State Com 2H**Project ID: 12881
Work Order Number(s): 669781Report Date: 08.13.2020
Date Received: 08.12.2020**Sample receipt non conformances and comments:****Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3134374 Chloride by EPA 300

Lab Sample ID 669781-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 669781-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3134434 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7709337-1-BLK.



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP1 @ 1'**
Lab Sample Id: 669781-001

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3134374

Date Prep: 08.12.2020 13:10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	08.12.2020 13:30	UX	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3134438

Date Prep: 08.12.2020 12:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 13:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 13:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 13:00	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 13:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-130	08.12.2020 13:00	
o-Terphenyl	84-15-1	117	%	70-130	08.12.2020 13:00	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP1 @ 1'**
Lab Sample Id: 669781-001

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00569	0.00202	mg/kg	08.12.2020 23:13		1
Toluene	108-88-3	0.0179	0.00202	mg/kg	08.12.2020 23:13		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.12.2020 23:13	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.12.2020 23:13	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.12.2020 23:13	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.12.2020 23:13	U	1
Total BTEX		0.0236	0.00202	mg/kg	08.12.2020 23:13		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.12.2020 23:13		
1,4-Difluorobenzene	540-36-3	118	%	70-130	08.12.2020 23:13		



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP2 @ 1'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-002 Date Collected: 08.11.2020 00:00 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.3	4.98	mg/kg	08.12.2020 13:50		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 14:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 14:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 14:05	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 14:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	08.12.2020 14:05	
o-Terphenyl	84-15-1	111	%	70-130	08.12.2020 14:05	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP2 @ 1'**
Lab Sample Id: 669781-002

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.12.2020 23:34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.12.2020 23:34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.12.2020 23:34	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.12.2020 23:34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.12.2020 23:34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.12.2020 23:34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.12.2020 23:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.12.2020 23:34		
1,4-Difluorobenzene	540-36-3	112	%	70-130	08.12.2020 23:34		



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP3 @ 1'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-003 Date Collected: 08.11.2020 00:00 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	268	5.04	mg/kg	08.12.2020 13:56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 14:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 14:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 14:27	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 14:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-130	08.12.2020 14:27	
o-Terphenyl	84-15-1	107	%	70-130	08.12.2020 14:27	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP3 @ 1'**
Lab Sample Id: 669781-003

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.12.2020 23:54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.12.2020 23:54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.12.2020 23:54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.12.2020 23:54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.12.2020 23:54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.12.2020 23:54	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.12.2020 23:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	08.12.2020 23:54	
1,4-Difluorobenzene	540-36-3	115	%	70-130	08.12.2020 23:54	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP4 @ 1'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-004 Date Collected: 08.11.2020 00:00 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.3	4.96	mg/kg	08.12.2020 14:02		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.12.2020 14:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	56.7	49.8	mg/kg	08.12.2020 14:48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.12.2020 14:48	U	1
Total TPH	PHC635	56.7	49.8	mg/kg	08.12.2020 14:48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-130	08.12.2020 14:48	
o-Terphenyl	84-15-1	109	%	70-130	08.12.2020 14:48	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP4 @ 1'**
Lab Sample Id: 669781-004

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 01:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 01:17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 01:17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 01:17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 01:17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 01:17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 01:17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.13.2020 01:17		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.13.2020 01:17		



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP5 @ 1'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-005 Date Collected: 08.11.2020 00:00 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	158	4.99	mg/kg	08.12.2020 14:09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 15:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 15:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 15:10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 15:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-130	08.12.2020 15:10	
o-Terphenyl	84-15-1	112	%	70-130	08.12.2020 15:10	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP5 @ 1'**
Lab Sample Id: 669781-005

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.13.2020 01:37	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.13.2020 01:37	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.13.2020 01:37	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.13.2020 01:37	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.13.2020 01:37	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.13.2020 01:37	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.13.2020 01:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	08.13.2020 01:37	
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.13.2020 01:37	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP6 @ 1'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-006 Date Collected: 08.11.2020 00:00 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	71.8	4.95	mg/kg	08.12.2020 14:28		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 15:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 15:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 15:32	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 15:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-130	08.12.2020 15:32	
o-Terphenyl	84-15-1	108	%	70-130	08.12.2020 15:32	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP6 @ 1'**
Lab Sample Id: 669781-006

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.13.2020 01:58	U	1
Toluene	108-88-3	0.00474	0.00202	mg/kg	08.13.2020 01:58		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.13.2020 01:58	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.13.2020 01:58	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.13.2020 01:58	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.13.2020 01:58	U	1
Total BTEX		0.00474	0.00202	mg/kg	08.13.2020 01:58		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.13.2020 01:58		
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.13.2020 01:58		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP7 @ 1'**
Lab Sample Id: 669781-007

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3134374

Date Prep: 08.12.2020 13:10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	44.7	4.95	mg/kg	08.12.2020 14:34		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3134438

Date Prep: 08.12.2020 12:00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.12.2020 15:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.12.2020 15:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.12.2020 15:54	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.12.2020 15:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-130	08.12.2020 15:54	
o-Terphenyl	84-15-1	107	%	70-130	08.12.2020 15:54	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP7 @ 1'**
Lab Sample Id: 669781-007

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 02:18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.2020 02:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 02:18	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.13.2020 02:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 02:18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 02:18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.2020 02:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	08.13.2020 02:18		
1,4-Difluorobenzene	540-36-3	111	%	70-130	08.13.2020 02:18		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP8 @ 1'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-008 Date Collected: 08.11.2020 00:00 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.0	4.98	mg/kg	08.12.2020 14:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 16:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 16:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 16:16	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 16:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	08.12.2020 16:16	
o-Terphenyl	84-15-1	107	%	70-130	08.12.2020 16:16	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP8 @ 1'**
Lab Sample Id: 669781-008

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3134385

Prep Method: SW5035A

% Moisture:

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 02:39	U	1
Toluene	108-88-3	0.00441	0.00200	mg/kg	08.13.2020 02:39		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 02:39	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.13.2020 02:39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 02:39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 02:39	U	1
Total BTEX		0.00441	0.00200	mg/kg	08.13.2020 02:39		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.13.2020 02:39		
1,4-Difluorobenzene	540-36-3	113	%	70-130	08.13.2020 02:39		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP9 @ 3'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-009 Date Collected: 08.11.2020 00:00 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	479	5.05	mg/kg	08.12.2020 14:47		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 16:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 16:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 16:38	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 16:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-130	08.12.2020 16:38	
o-Terphenyl	84-15-1	113	%	70-130	08.12.2020 16:38	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP9 @ 3'**
Lab Sample Id: 669781-009

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.13.2020 02:59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.13.2020 02:59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.13.2020 02:59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.13.2020 02:59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.13.2020 02:59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.13.2020 02:59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.13.2020 02:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	08.13.2020 02:59		
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.13.2020 02:59		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP10@ 4'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-010 Date Collected: 08.11.2020 00:00 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	171	5.00	mg/kg	08.12.2020 14:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.12.2020 17:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.12.2020 17:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.12.2020 17:00	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.12.2020 17:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-130	08.12.2020 17:00	
o-Terphenyl	84-15-1	109	%	70-130	08.12.2020 17:00	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP10@ 4'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-010

Date Collected: 08.11.2020 00:00

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 03:20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.2020 03:20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 03:20	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.13.2020 03:20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 03:20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 03:20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.2020 03:20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.13.2020 03:20		
4-Bromofluorobenzene	460-00-4	117	%	70-130	08.13.2020 03:20		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP11 @ 4'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-011 Date Collected: 08.11.2020 00:00 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	666	5.05	mg/kg	08.12.2020 14:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 17:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 17:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 17:44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 17:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-130	08.12.2020 17:44	
o-Terphenyl	84-15-1	108	%	70-130	08.12.2020 17:44	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP11 @ 4'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-011

Date Collected: 08.11.2020 00:00

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 03:40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 03:40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 03:40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 03:40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 03:40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 03:40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 03:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.13.2020 03:40		
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.13.2020 03:40		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP12 @ 4'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-012 Date Collected: 08.11.2020 00:00 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	83.5	4.98	mg/kg	08.12.2020 15:18		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 18:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 18:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 18:06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 18:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-130	08.12.2020 18:06	
o-Terphenyl	84-15-1	117	%	70-130	08.12.2020 18:06	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP12 @ 4'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-012

Date Collected: 08.11.2020 00:00

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 04:01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.2020 04:01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 04:01	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.13.2020 04:01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 04:01	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 04:01	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.2020 04:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	08.13.2020 04:01	
1,4-Difluorobenzene	540-36-3	112	%	70-130	08.13.2020 04:01	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP13 @ 3'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-013 Date Collected: 08.11.2020 00:00 Sample Depth: 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	858	4.95	mg/kg	08.12.2020 15:25		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 18:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 18:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 18:27	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 18:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	08.12.2020 18:27	
o-Terphenyl	84-15-1	113	%	70-130	08.12.2020 18:27	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP13 @ 3'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-013

Date Collected: 08.11.2020 00:00

Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 13:00

Basis: Wet Weight

Seq Number: 3134385

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.13.2020 04:21	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.13.2020 04:21	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.13.2020 04:21	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.13.2020 04:21	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.13.2020 04:21	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.13.2020 04:21	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.13.2020 04:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.13.2020 04:21	
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.13.2020 04:21	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP14 @ 4'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-014 Date Collected: 08.11.2020 00:00 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	382	5.02	mg/kg	08.12.2020 15:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 18:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 18:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 18:49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 18:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-130	08.12.2020 18:49	
o-Terphenyl	84-15-1	110	%	70-130	08.12.2020 18:49	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP14 @ 4'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-014

Date Collected: 08.11.2020 00:00

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.12.2020 22:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.12.2020 22:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.12.2020 22:55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.12.2020 22:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.12.2020 22:55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.12.2020 22:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.12.2020 22:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.12.2020 22:55	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.12.2020 22:55	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP15 @ 2'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-015 Date Collected: 08.11.2020 00:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	384	4.99	mg/kg	08.12.2020 15:50		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 19:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 19:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 19:11	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 19:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	08.12.2020 19:11	
o-Terphenyl	84-15-1	104	%	70-130	08.12.2020 19:11	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP15 @ 2'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-015

Date Collected: 08.11.2020 00:00

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.12.2020 23:15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.12.2020 23:15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.12.2020 23:15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.12.2020 23:15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.12.2020 23:15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.12.2020 23:15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.12.2020 23:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.12.2020 23:15		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.12.2020 23:15		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP16 @ 2'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-016 Date Collected: 08.11.2020 00:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	226	5.00	mg/kg	08.12.2020 15:56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.12.2020 19:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.12.2020 19:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.12.2020 19:33	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.12.2020 19:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-130	08.12.2020 19:33	
o-Terphenyl	84-15-1	108	%	70-130	08.12.2020 19:33	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP16 @ 2'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-016

Date Collected: 08.11.2020 00:00

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.12.2020 23:36	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.12.2020 23:36	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.12.2020 23:36	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.12.2020 23:36	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.12.2020 23:36	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.12.2020 23:36	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.12.2020 23:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.12.2020 23:36		
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.12.2020 23:36		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP17 @ 2'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-017 Date Collected: 08.11.2020 00:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	296	5.00	mg/kg	08.12.2020 16:03		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 19:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 19:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 19:54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 19:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.12.2020 19:54	
o-Terphenyl	84-15-1	107	%	70-130	08.12.2020 19:54	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP17 @ 2'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-017

Date Collected: 08.11.2020 00:00

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.12.2020 23:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.12.2020 23:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.12.2020 23:56	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.12.2020 23:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.12.2020 23:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.12.2020 23:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.12.2020 23:56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.12.2020 23:56		
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.12.2020 23:56		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP18 @ 2'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-018 Date Collected: 08.11.2020 00:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	341	5.00	mg/kg	08.12.2020 16:09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 20:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 20:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 20:16	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 20:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	08.12.2020 20:16	
o-Terphenyl	84-15-1	108	%	70-130	08.12.2020 20:16	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP18 @ 2'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-018

Date Collected: 08.11.2020 00:00

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 00:16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.2020 00:16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 00:16	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.13.2020 00:16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 00:16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 00:16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.2020 00:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.13.2020 00:16	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.13.2020 00:16	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP19 @ 2'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-019 Date Collected: 08.11.2020 00:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	332	5.03	mg/kg	08.12.2020 16:15		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 20:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 20:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 20:37	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 20:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	08.12.2020 20:37	
o-Terphenyl	84-15-1	104	%	70-130	08.12.2020 20:37	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP19 @ 2'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-019

Date Collected: 08.11.2020 00:00

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.13.2020 00:37	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.13.2020 00:37	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.13.2020 00:37	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.13.2020 00:37	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.13.2020 00:37	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.13.2020 00:37	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.13.2020 00:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.13.2020 00:37		
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.13.2020 00:37		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP20 @ 2'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-020 Date Collected: 08.11.2020 00:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.12.2020 13:10 Basis: Wet Weight
 Seq Number: 3134374

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.9	4.96	mg/kg	08.12.2020 16:22		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 12:00 Basis: Wet Weight
 Seq Number: 3134438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 20:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 20:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 20:59	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 20:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.12.2020 20:59	
o-Terphenyl	84-15-1	108	%	70-130	08.12.2020 20:59	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP20 @ 2'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-020

Date Collected: 08.11.2020 00:00

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.13.2020 00:57	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.13.2020 00:57	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.13.2020 00:57	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.13.2020 00:57	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.13.2020 00:57	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.13.2020 00:57	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.13.2020 00:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.13.2020 00:57	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.13.2020 00:57	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP21 @ 2'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-021 Date Collected: 08.11.2020 00:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 08.12.2020 14:10 Basis: Wet Weight
 Seq Number: 3134375

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	219	5.00	mg/kg	08.12.2020 14:38		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 17:00 Basis: Wet Weight
 Seq Number: 3134434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.13.2020 01:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.13.2020 01:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.13.2020 01:07	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.13.2020 01:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	08.13.2020 01:07	
o-Terphenyl	84-15-1	119	%	70-130	08.13.2020 01:07	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP21 @ 2'**

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-021

Date Collected: 08.11.2020 00:00

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.13.2020 01:18	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.13.2020 01:18	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.13.2020 01:18	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.13.2020 01:18	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.13.2020 01:18	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.13.2020 01:18	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.13.2020 01:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.2020 01:18		
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.13.2020 01:18		



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SP22 @ 2'** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-022 Date Collected: 08.11.2020 00:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 08.12.2020 14:10 Basis: Wet Weight
 Seq Number: 3134375

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	481	4.95	mg/kg	08.12.2020 14:54		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 17:00 Basis: Wet Weight
 Seq Number: 3134434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.13.2020 01:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.13.2020 01:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.13.2020 01:26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.13.2020 01:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-130	08.13.2020 01:26	
o-Terphenyl	84-15-1	121	%	70-130	08.13.2020 01:26	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: SP22 @ 2'

Matrix: Soil

Date Received: 08.12.2020 11:20

Lab Sample Id: 669781-022

Date Collected: 08.11.2020 00:00

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 01:38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 01:38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 01:38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 01:38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 01:38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 01:38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 01:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.13.2020 01:38		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.2020 01:38		



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **NW1** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-023 Date Collected: 08.11.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 08.12.2020 14:10 Basis: Wet Weight
 Seq Number: 3134375

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	133	5.02	mg/kg	08.12.2020 14:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 17:00 Basis: Wet Weight
 Seq Number: 3134434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.13.2020 01:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.13.2020 01:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.13.2020 01:45	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.13.2020 01:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	08.13.2020 01:45	
o-Terphenyl	84-15-1	117	%	70-130	08.13.2020 01:45	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **NW1**
Lab Sample Id: 669781-023

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 01:58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.2020 01:58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 01:58	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.13.2020 01:58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 01:58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 01:58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.2020 01:58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.13.2020 01:58		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.13.2020 01:58		



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **NW2B**
Lab Sample Id: 669781-024

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3134375

Prep Method: E300P

% Moisture:

Date Prep: 08.12.2020 14:10

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	107	4.99	mg/kg	08.12.2020 15:04		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3134434

Prep Method: SW8015P

% Moisture:

Date Prep: 08.12.2020 17:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.13.2020 02:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.13.2020 02:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.13.2020 02:04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.13.2020 02:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.13.2020 02:04	
o-Terphenyl	84-15-1	111	%	70-130	08.13.2020 02:04	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **NW2B**
Lab Sample Id: 669781-024

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.13.2020 03:22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.13.2020 03:22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.13.2020 03:22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.13.2020 03:22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.13.2020 03:22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.13.2020 03:22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.13.2020 03:22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.13.2020 03:22		
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.13.2020 03:22		



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **WW1** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-025 Date Collected: 08.11.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 08.12.2020 14:10 Basis: Wet Weight
 Seq Number: 3134375

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	379	5.00	mg/kg	08.12.2020 15:10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 17:00 Basis: Wet Weight
 Seq Number: 3134434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.13.2020 02:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	160	49.9	mg/kg	08.13.2020 02:22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	57.3	49.9	mg/kg	08.13.2020 02:22		1
Total TPH	PHC635	217	49.9	mg/kg	08.13.2020 02:22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-130	08.13.2020 02:22	
o-Terphenyl	84-15-1	125	%	70-130	08.13.2020 02:22	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **WW1**
Lab Sample Id: 669781-025

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 03:42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.2020 03:42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 03:42	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.13.2020 03:42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 03:42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 03:42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.2020 03:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.2020 03:42		
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.13.2020 03:42		



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **WW2B** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-026 Date Collected: 08.11.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 08.12.2020 14:10 Basis: Wet Weight
 Seq Number: 3134375

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.8	5.00	mg/kg	08.12.2020 15:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 17:00 Basis: Wet Weight
 Seq Number: 3134434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.13.2020 02:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.13.2020 02:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.13.2020 02:41	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.13.2020 02:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	08.13.2020 02:41	
o-Terphenyl	84-15-1	117	%	70-130	08.13.2020 02:41	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **WW2B**
Lab Sample Id: 669781-026

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.13.2020 04:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.13.2020 04:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.13.2020 04:03	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.13.2020 04:03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.13.2020 04:03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.13.2020 04:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.13.2020 04:03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.13.2020 04:03		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.13.2020 04:03		



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SW1** Matrix: Soil Date Received: 08.12.2020 11:20
 Lab Sample Id: 669781-027 Date Collected: 08.11.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 08.12.2020 14:10 Basis: Wet Weight
 Seq Number: 3134375

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	516	5.04	mg/kg	08.12.2020 15:31		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.12.2020 17:00 Basis: Wet Weight
 Seq Number: 3134434

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.13.2020 03:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.13.2020 03:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.13.2020 03:00	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.13.2020 03:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-130	08.13.2020 03:00	
o-Terphenyl	84-15-1	118	%	70-130	08.13.2020 03:00	



Certificate of Analytical Results 669781

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SW1**
Lab Sample Id: 669781-027

Matrix: Soil
Date Collected: 08.11.2020 00:00

Date Received: 08.12.2020 11:20

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.12.2020 14:00

Basis: Wet Weight

Seq Number: 3134387

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.13.2020 04:23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.13.2020 04:23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.13.2020 04:23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.13.2020 04:23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.13.2020 04:23	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.13.2020 04:23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.13.2020 04:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.13.2020 04:23	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.13.2020 04:23	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Etech Environmental & Safety Solution, Inc

Boone 16 State Com 2H

Analytical Method: Chloride by EPA 300

Seq Number: 3134374

MB Sample Id: 7709273-1-BLK

Matrix: Solid

LCS Sample Id: 7709273-1-BKS

Prep Method: E300P

Date Prep: 08.12.2020

LCSD Sample Id: 7709273-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	266	106	266	106	90-110	0	20	mg/kg	08.12.2020 13:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3134375

MB Sample Id: 7709276-1-BLK

Matrix: Solid

LCS Sample Id: 7709276-1-BKS

Prep Method: E300P

Date Prep: 08.12.2020

LCSD Sample Id: 7709276-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	264	106	264	106	90-110	0	20	mg/kg	08.12.2020 14:28	

Analytical Method: Chloride by EPA 300

Seq Number: 3134374

Parent Sample Id: 669781-001

Matrix: Soil

MS Sample Id: 669781-001 S

Prep Method: E300P

Date Prep: 08.12.2020

MSD Sample Id: 669781-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.02	251	297	118	260	104	90-110	13	20	mg/kg	08.12.2020 13:37	X

Analytical Method: Chloride by EPA 300

Seq Number: 3134374

Parent Sample Id: 669781-011

Matrix: Soil

MS Sample Id: 669781-011 S

Prep Method: E300P

Date Prep: 08.12.2020

MSD Sample Id: 669781-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	666	253	907	95	897	91	90-110	1	20	mg/kg	08.12.2020 15:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3134375

Parent Sample Id: 669772-004

Matrix: Soil

MS Sample Id: 669772-004 S

Prep Method: E300P

Date Prep: 08.12.2020

MSD Sample Id: 669772-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	424	249	670	99	673	100	90-110	0	20	mg/kg	08.12.2020 15:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3134375

Parent Sample Id: 669781-021

Matrix: Soil

MS Sample Id: 669781-021 S

Prep Method: E300P

Date Prep: 08.12.2020

MSD Sample Id: 669781-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	219	250	475	102	479	104	90-110	1	20	mg/kg	08.12.2020 14:43	

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

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

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

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



Etech Environmental & Safety Solution, Inc
Boone 16 State Com 2H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134438

MB Sample Id: 7709336-1-BLK

Matrix: Solid

LCS Sample Id: 7709336-1-BKS

Prep Method: SW8015P

Date Prep: 08.12.2020

LCSD Sample Id: 7709336-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	912	91	885	89	70-130	3	20	mg/kg	08.12.2020 12:17	
Diesel Range Organics (DRO)	<50.0	1000	933	93	910	91	70-130	2	20	mg/kg	08.12.2020 12:17	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag		LCSD %Rec	LCSD Flag		Limits	Units	Analysis Date	
1-Chlorooctane	121		120			123			70-130	%	08.12.2020 12:17	
o-Terphenyl	115		116			113			70-130	%	08.12.2020 12:17	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134434

MB Sample Id: 7709337-1-BLK

Matrix: Solid

LCS Sample Id: 7709337-1-BKS

Prep Method: SW8015P

Date Prep: 08.12.2020

LCSD Sample Id: 7709337-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1040	104	1000	100	70-130	4	20	mg/kg	08.12.2020 20:04	
Diesel Range Organics (DRO)	<50.0	1000	1030	103	996	100	70-130	3	20	mg/kg	08.12.2020 20:04	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag		LCSD %Rec	LCSD Flag		Limits	Units	Analysis Date	
1-Chlorooctane	125		81			81			70-130	%	08.12.2020 20:04	
o-Terphenyl	143	**	75			72			70-130	%	08.12.2020 20:04	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134438

Matrix: Solid
MB Sample Id: 7709336-1-BLK

Prep Method: SW8015P

Date Prep: 08.12.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.12.2020 11:55	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134434

Matrix: Solid
MB Sample Id: 7709337-1-BLK

Prep Method: SW8015P

Date Prep: 08.12.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.12.2020 19:45	

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

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

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

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



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Boone 16 State Com 2H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134438

Parent Sample Id: 669781-001

Matrix: Soil

MS Sample Id: 669781-001 S

Prep Method: SW8015P

Date Prep: 08.12.2020

MSD Sample Id: 669781-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	878	88	898	90	70-130	2	20	mg/kg	08.12.2020 13:21	
Diesel Range Organics (DRO)	<49.9	997	923	93	945	95	70-130	2	20	mg/kg	08.12.2020 13:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		117		70-130	%	08.12.2020 13:21
o-Terphenyl	110		112		70-130	%	08.12.2020 13:21

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134434

Parent Sample Id: 669771-001

Matrix: Soil

MS Sample Id: 669771-001 S

Prep Method: SW8015P

Date Prep: 08.12.2020

MSD Sample Id: 669771-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	986	99	975	98	70-130	1	20	mg/kg	08.12.2020 21:01	
Diesel Range Organics (DRO)	<49.9	997	995	100	979	98	70-130	2	20	mg/kg	08.12.2020 21:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		130		70-130	%	08.12.2020 21:01
o-Terphenyl	122		119		70-130	%	08.12.2020 21:01

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134385

MB Sample Id: 7709350-1-BLK

Matrix: Solid

LCS Sample Id: 7709350-1-BKS

Prep Method: SW5035A

Date Prep: 08.12.2020

LCSD Sample Id: 7709350-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.106	106	0.109	109	70-130	3	35	mg/kg	08.12.2020 18:26	
Toluene	<0.00200	0.100	0.0970	97	0.0984	98	70-130	1	35	mg/kg	08.12.2020 18:26	
Ethylbenzene	<0.00200	0.100	0.0939	94	0.0960	96	70-130	2	35	mg/kg	08.12.2020 18:26	
m,p-Xylenes	<0.00400	0.200	0.185	93	0.190	95	70-130	3	35	mg/kg	08.12.2020 18:26	
o-Xylene	<0.00200	0.100	0.0907	91	0.0944	94	70-130	4	35	mg/kg	08.12.2020 18:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		100		102		70-130	%	08.12.2020 18:26
4-Bromofluorobenzene	105		94		99		70-130	%	08.12.2020 18:26

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

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

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

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



Etech Environmental & Safety Solution, Inc

Boone 16 State Com 2H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134387

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.12.2020

MB Sample Id: 7709354-1-BLK

LCS Sample Id: 7709354-1-BKS

LCSD Sample Id: 7709354-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.109	109	0.103	103	70-130	6	35	mg/kg	08.12.2020 20:32	
Toluene	<0.00200	0.100	0.104	104	0.106	106	70-130	2	35	mg/kg	08.12.2020 20:32	
Ethylbenzene	<0.00200	0.100	0.0996	100	0.0941	94	70-130	6	35	mg/kg	08.12.2020 20:32	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.191	96	70-130	6	35	mg/kg	08.12.2020 20:32	
o-Xylene	<0.00200	0.100	0.0997	100	0.0936	94	70-130	6	35	mg/kg	08.12.2020 20:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		99		70-130	%	08.12.2020 20:32
4-Bromofluorobenzene	101		99		98		70-130	%	08.12.2020 20:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134385

Matrix: Soil

Prep Method: SW5035A

Date Prep: 08.12.2020

Parent Sample Id: 669772-005

MS Sample Id: 669772-005 S

MSD Sample Id: 669772-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0912	91	0.0846	85	70-130	8	35	mg/kg	08.12.2020 19:08	
Toluene	<0.00200	0.100	0.0855	86	0.0774	78	70-130	10	35	mg/kg	08.12.2020 19:08	
Ethylbenzene	<0.00200	0.100	0.0835	84	0.0743	75	70-130	12	35	mg/kg	08.12.2020 19:08	
m,p-Xylenes	<0.00400	0.200	0.167	84	0.146	73	70-130	13	35	mg/kg	08.12.2020 19:08	
o-Xylene	<0.00200	0.100	0.0818	82	0.0718	72	70-130	13	35	mg/kg	08.12.2020 19:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		70-130	%	08.12.2020 19:08
4-Bromofluorobenzene	102		95		70-130	%	08.12.2020 19:08

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134387

Matrix: Soil

Prep Method: SW5035A

Date Prep: 08.12.2020

Parent Sample Id: 669781-014

MS Sample Id: 669781-014 S

MSD Sample Id: 669781-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0940	94	0.0955	96	70-130	2	35	mg/kg	08.12.2020 21:13	
Toluene	<0.00200	0.0998	0.0924	93	0.0898	90	70-130	3	35	mg/kg	08.12.2020 21:13	
Ethylbenzene	<0.00200	0.0998	0.0862	86	0.0858	86	70-130	0	35	mg/kg	08.12.2020 21:13	
m,p-Xylenes	<0.00399	0.200	0.175	88	0.174	87	70-130	1	35	mg/kg	08.12.2020 21:13	
o-Xylene	<0.00200	0.0998	0.0857	86	0.0850	85	70-130	1	35	mg/kg	08.12.2020 21:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	08.12.2020 21:13
4-Bromofluorobenzene	102		99		70-130	%	08.12.2020 21:13

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

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

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

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

XENCO

Dep:

Chain of Custody
Date: 10/06/20
Met: 10.00 Lbs
DV: 0.00
SPECIAL HANDLING: 0.00
TOTAL: 0.00

SHIPPING: 0.00
SPECIAL: 0.00
HANDLING: 0.00
TOTAL: 0.00

Work Order No: 1069781

Sves: STANDARD OVERNIGHT HLD
Track: 9061 5134 7253

FL (561) 689-6701
SHIP DATE: 11/2/20

www.xenco.com Page 1 of 3

Project Manager:	Joel Lowry	Bill to: (if different)	
Company Name:	Etech Environmental & Safety	Company Name:	COG
Address:	3100 Plains Highway	Address:	
City, State ZIP:	Livingston, NM, 88260	City, State ZIP:	
Phone:	575-396-2378	Email:	Email Results to PM@etechenv.com + Client
Project Name:	Boone 16 State com 2 H	Turn Around	
Project Number:	12881	Routine:	☐
Project Location:	Lea County, NM	Push:	☒
Sampler's Name:	Miguel Ramirez	Due Date:	
PO #:			

SAMPLE RECEIPT	
Temp Blank:	Yes ☐ No ☒
Temperature (°C):	0.00
Received Intact:	Yes ☐ No ☒
Thermometer ID:	
Cooler Custody Seals:	Yes ☐ No ☐ N/A ☐
Sample Custody Seals:	Yes ☐ No ☐ N/A ☐
Correction Factor:	
Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
SP101	Soil	8-11-20		1'
SP201	Soil	8-11-20		1'
SP301	Soil	8-11-20		1'
SP401	Soil	8-11-20		1'
SP501	Soil	8-11-20		1'
SP601	Soil	8-11-20		1'
SP701	Soil	8-11-20		1'
SP801	Soil	8-11-20		1'
SP901	Soil	8-11-20		1'
SP1001	Soil	8-11-20		1'

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

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Received by: (Signature)

Date/Time

ANALYSIS REQUEST

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level: ☐ Level I ☐ Level II ☐ PST/UST ☐ TRR ☐ Level I ☐
Deliverables: EDD ☐ ADAPT ☐ Other:

Preservative Codes

HN03: HN
H2S04: H2
HCL: HL
None: NO
NaOH: NA
MeOH: ME
Zn Acetate+ NaOH: Zn

TAT starts the day received by the lab, if received by 4:30pm

Sample Comments

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride E300	BTEX 8021	TPH Modified Ext	TPH TX1005
SP101	Soil	8-11-20		1'		X	X	X	X
SP201	Soil	8-11-20		1'		X	X	X	X
SP301	Soil	8-11-20		1'		X	X	X	X
SP401	Soil	8-11-20		1'		X	X	X	X
SP501	Soil	8-11-20		1'		X	X	X	X
SP601	Soil	8-11-20		1'		X	X	X	X
SP701	Soil	8-11-20		1'		X	X	X	X
SP801	Soil	8-11-20		1'		X	X	X	X
SP901	Soil	8-11-20		1'		X	X	X	X
SP1001	Soil	8-11-20		1'		X	X	X	X

X
M
Z
O
O

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 502-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1266
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (905) 756-0747, Delray Beach, FL (561) 689-6707
Atlanta, GA (770) 449-8800

Work Order No: 0009781

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Project Manager:	Joel Lowmy	Bill to: (if different)	
Company Name:	Etech Environmental & Safety	Company Name:	COG
Address:	3100 Plains Highway	Address:	
City, State ZIP:	Lowington, NM, 88260	City, State ZIP:	
Phone:	575-396-2378	Email:	Email Results to PM@etechenv.com + Client

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting Level If ☐ Level If ☐ - PST/US ☐ TRR ☐ Level If ☐

Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	Project 15 State 101m CH	Turn Around
Project Number:	12881	Routine: ☐
Project Location:	Lea County, NM	Rush: ☒
Sampler's Name:	Miguel Ramirez	Due Date:
PO #:		

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):							
Received Inact:	Yes	No	Thermometer ID				
Cooler Custody Seals:	Yes	No	MA	Correction Factor:			
Sample Custody Seals:	Yes	No	N/A	Total Containers:			

ANALYSIS REQUEST								Preservative Codes
							HNO ₃ : HN	
							H ₂ SO ₄ : H ₂	
							HCl: HL	
							None: NO	
							NaOH: Na	
							MeOH: Me	
							Zn Acetate+ NaOH: Zn	
E300								
21								
ified Ext								
005								

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number Code					Sample Comments
						Chloride	BTEX 802	TPH Mod	TPH TX10	
SP11 @ 4'	Soil	8-11-20		4'	1	X	X	X		
SP12 @ 4'	Soil	8-11-20		4'	1	X	X	X		
SP13 @ 3'	Soil	8-11-20		3'	1	X	X	X		
SP14 @ 4'	Soil	8-11-20		4'	1	X	X	X		
SP15 @ 2'	Soil	8-11-20		2'	1	X	X	X		
SP16 @ 7'	Soil	8-11-20		2'	1	X	X	X		
SP17 @ 7'	Soil	8-11-20		2'	1	X	X	X		
SP18 @ 2'	Soil	8-11-20		2'	1	X	X	X		
SP19 @ 2'	Soil	8-11-20		2'	1	X	X	X		
SP20 @ 2'	Soil	8-11-20		2'	1	X	X	X		
Total	2007/6/10	2008/6/20								

Total		200.7 / 6010		200.8 / 6020:	
Circle Method(s) and Metal(s) to be analyzed					
8RCRA	13PPM	Texas 11	Al	Sb	As
			Ba	Be	B
			Cd	Ca	Cr
			Co	Cu	Fe
			Pb	Mg	Mn
			Mo	Ni	K
			Se	Ag	SiO2
			Na	Sr	Ti
			Sn	U	V
			Zn		
TCLP / SPLP 6010:		8RCRA	Sb	As	Ba
			Be	Cd	Cr
			Co	Cu	Pb
			Mn	Mo	Ni
			Se	Ag	Ti
			U		

1637 / 245.1 / 7470 / 7471 : Hg

Retention of the documents and the management of samples constitutes a valid purchase order from client company to Xencio, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xencio will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xencio. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xencio, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)

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Other

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Mr. D.

7028379 / 1211.2

2/11/15

Reinquisted by: (signature)

Received by: (Signature)

Date/Time

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3

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Abstract

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XENCO**Chain of Custody**

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 986-3199, Phoenix, AZ (480) 355-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (904) 756-0747, Delray Beach, FL (561) 699-6701
 Atlanta, GA (770) 449-0800

Work Order No:

U609781

www.xenco.com Page 3 of 3

Project Manager:	Joel Lowry	Bill to: (if different)	
Company Name:	Etech Environmental & Safety	Company Name:	COG
Address:	3100 Plains Highway	Address:	
City, State ZIP:	Longton, NM, 88260	City, State ZIP:	
Phone:	575-396-2378	Email:	Email Results to PM@etechenv.com + Client

Work Order Comments	
Program: USTPST ☐ PRP ☐ Brownfield ☐ RRC ☐ Superfund ☐	
State of Project:	
Reporting Level: ☐ Level 1 ☐ PST/UST ☐ TRR ☐ Level 1 ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name:	Bernalb State Com 2H	Turn Around	
Project Number:	12881	Routing:	☐
Project Location:	Lea County, NM	Routing:	☒
Sampler's Name:	Miguel Ramirez	Due Date:	
PO #:			

SAMPLE RECEIPT	Temp Blank:	Yes	No	Well Ice:	Yes	No
Temperature (°C):		Thermometer ID				
Received In tact:	Yes	No				
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:		
Sample Custody Seals:	Yes	No	N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride E300	BTEX 8021	TPH Modified Ext	TPH TX1005	ANALYSIS REQUEST	Preservative Codes	Sample Comments
SR 21 @ 2'	Soil	8-11-20		2'	1	X	X	X	X		HN03: HN	
SP 22 @ 2'	Soil	8-11-20		2'	1	X	X	X	X		H2S04: H2	
NW 1	Soil	8-11-20		1	1	X	X	X	X		HCL: HL	
NW 2 B	Soil	8-11-20		1	1	X	X	X	X		Nore: NO	
WW 1	Soil	8-11-20		1	1	X	X	X	X		NaOH: Na	
WW 2 B	Soil	8-11-20		1	1	X	X	X	X		MeOH: Me	
SW 1	Soil	8-11-20		1	1	X	X	X	X		Zn Acetate+ NaOH: Zn	
											TAT starts the day received by the lab, if received by 4:30pm	

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texas 11	AN	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Pb	Mn	Mo	Ni	K	Se	Ag	SiO2	Na	Sr	Ti	Sn	U	V	Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010: 8RCRA		Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Pb	Mn	Mo	Ni	K	Se	Ag	SiO2	Na	Sr	Ti	Sn	U	V	Zn	
		1631 / 245.1 / 7470 / 7471 - Hg																											

Notes: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Joel Lowry	Teresa Arrendore	8/11/20	Teresa Arrendore	Joel Lowry	8/11/20

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental & Safety Solution, I

Date/ Time Received: 08.12.2020 11.20.00 AM

Work Order #: 669781

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-8

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

BTEX was in bulk container

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 08.12.2020

Checklist reviewed by:



Jessica Kramer

Date: 08.12.2020

Certificate of Analysis Summary 669822

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Boone 16 State Com 2H

Project Id: 12881
Contact: PM
Project Location: Lea County, NM

Date Received in Lab: Wed 08.12.2020 11:23
Report Date: 08.13.2020 15:28
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669822-001	669822-002	669822-003	669822-004	669822-005	669822-006
	<i>Field Id:</i>	FL 23@4'	FL 24@2'	SW1B	SW2	SW3	SW4
	<i>Depth:</i>	4- ft	2- ft				
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.12.2020 00:00	08.12.2020 00:00	08.12.2020 00:00	08.12.2020 00:00	08.12.2020 00:00	08.12.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.12.2020 16:24	08.12.2020 16:24	08.12.2020 16:24	08.12.2020 16:24	08.12.2020 16:24	08.12.2020 16:24
	<i>Analyzed:</i>	08.12.2020 17:51	08.12.2020 18:14	08.12.2020 18:36	08.12.2020 18:59	08.12.2020 19:21	08.12.2020 19:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.0105 0.0105	<0.00198 0.00198
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.0105 0.0105	<0.00198 0.00198
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.0105 0.0105	<0.00198 0.00198
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00396 0.00396	<0.00399 0.00399	<0.0211 0.0211	<0.00396 0.00396
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.0105 0.0105	<0.00198 0.00198
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.0105 0.0105	<0.00198 0.00198
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.0105 0.0105	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	08.12.2020 14:37	08.12.2020 14:37	08.12.2020 14:37	08.12.2020 14:37	08.12.2020 14:37	08.12.2020 14:37
	<i>Analyzed:</i>	08.12.2020 17:42	08.12.2020 17:59	08.12.2020 18:05	08.12.2020 18:10	08.12.2020 18:16	08.12.2020 18:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		465 9.92	76.1 9.96	99.8 9.96	202 10.1	120 10.0	418 9.94
TPH by SW8015 Mod	<i>Extracted:</i>	08.12.2020 11:45	08.12.2020 11:45	08.12.2020 11:45	08.12.2020 11:45	08.12.2020 11:45	08.12.2020 11:45
	<i>Analyzed:</i>	08.12.2020 11:46	08.12.2020 12:06	08.12.2020 12:26	08.12.2020 12:47	08.12.2020 13:07	08.12.2020 13:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<50.2 50.2	<50.2 50.2	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.2 50.2	<50.2 50.2	281 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.2 50.2	<50.2 50.2	<50.0 50.0	<50.0 50.0
Total TPH		<50.0 50.0	<49.9 49.9	<50.2 50.2	<50.2 50.2	281 50.0	<50.0 50.0

BRL - Below Reporting Limit

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



Certificate of Analysis Summary 669822

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Boone 16 State Com 2H

Project Id: 12881
Contact: PM
Project Location: Lea County, NM

Date Received in Lab: Wed 08.12.2020 11:23
Report Date: 08.13.2020 15:28
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669822-007	669822-008	669822-009	669822-010		
	<i>Field Id:</i>	EW1C	EW2C	EW3	WW3		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	08.12.2020 00:00	08.12.2020 00:00	08.12.2020 00:00	08.12.2020 00:00		
BTEX by EPA 8021B	<i>Extracted:</i>	08.12.2020 16:24	08.12.2020 16:24	08.12.2020 16:24	08.12.2020 16:24		
	<i>Analyzed:</i>	08.12.2020 20:17	08.12.2020 20:39	08.12.2020 21:02	08.12.2020 21:24		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.0370 0.0370		
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.0370 0.0370		
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.0370 0.0370		
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00398 0.00398	<0.0741 0.0741		
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.0370 0.0370		
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.0370 0.0370		
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.0370 0.0370		
Chloride by EPA 300	<i>Extracted:</i>	08.12.2020 14:37	08.12.2020 14:37	08.12.2020 14:37	08.12.2020 14:37		
	<i>Analyzed:</i>	08.12.2020 18:38	08.12.2020 18:44	08.12.2020 18:49	08.12.2020 18:55		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		135 9.96	142 9.98	125 9.96	151 9.92		
TPH by SW8015 Mod	<i>Extracted:</i>	08.12.2020 11:45	08.12.2020 11:45	08.12.2020 11:45	08.12.2020 11:45		
	<i>Analyzed:</i>	08.12.2020 13:47	08.12.2020 14:08	08.12.2020 14:28	08.12.2020 14:48		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.1 50.1	<50.2 50.2	<50.3 50.3		
Diesel Range Organics (DRO)		<50.0 50.0	<50.1 50.1	<50.2 50.2	<50.3 50.3		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.1 50.1	<50.2 50.2	<50.3 50.3		
Total TPH		<50.0 50.0	<50.1 50.1	<50.2 50.2	<50.3 50.3		

BRL - Below Reporting Limit

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





Analytical Report 669822

for

Etech Environmental & Safety Solution, Inc

Project Manager: PM

Boone 16 State Com 2H

12881

08.13.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.13.2020

Project Manager: **PM**

Etech Environmental & Safety Solution, Inc

P.O. Box 62228

Midland, TX 79711

Reference: Eurofins Xenco, LLC Report No(s): **669822**

Boone 16 State Com 2H

Project Address: Lea County, NM

PM :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 669822. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 669822 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 669822****Etech Environmental & Safety Solution, Inc, Midland, TX**

Boone 16 State Com 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FL 23@4'	S	08.12.2020 00:00	4 ft	669822-001
FL 24@2'	S	08.12.2020 00:00	2 ft	669822-002
SW1B	S	08.12.2020 00:00		669822-003
SW2	S	08.12.2020 00:00		669822-004
SW3	S	08.12.2020 00:00		669822-005
SW4	S	08.12.2020 00:00		669822-006
EW1C	S	08.12.2020 00:00		669822-007
EW2C	S	08.12.2020 00:00		669822-008
EW3	S	08.12.2020 00:00		669822-009
WW3	S	08.12.2020 00:00		669822-010



CASE NARRATIVE

Client Name: Etech Environmental & Safety Solution, Inc

Project Name: Boone 16 State Com 2H

Project ID: 12881
Work Order Number(s): 669822

Report Date: 08.13.2020
Date Received: 08.12.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3134308 TPH by SW8015 Mod

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

Samples affected are: 669822-007.



Certificate of Analytical Results 669822

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **FL 23@4'** Matrix: Soil Date Received: 08.12.2020 11:23
 Lab Sample Id: 669822-001 Date Collected: 08.12.2020 00:00 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CAC % Moisture:
 Analyst: MAB Date Prep: 08.12.2020 14:37 Basis: Wet Weight
 Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	465	9.92	mg/kg	08.12.2020 17:42		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.12.2020 11:45 Basis: Wet Weight
 Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 11:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 11:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 11:46	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 11:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	08.12.2020 11:46	
o-Terphenyl	84-15-1	112	%	70-135	08.12.2020 11:46	



Certificate of Analytical Results 669822

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **FL 23@4'**

Matrix: Soil

Date Received: 08.12.2020 11:23

Lab Sample Id: 669822-001

Date Collected: 08.12.2020 00:00

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.12.2020 17:51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.12.2020 17:51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.12.2020 17:51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.12.2020 17:51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.12.2020 17:51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.12.2020 17:51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.12.2020 17:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.12.2020 17:51		
4-Bromofluorobenzene	460-00-4	97	%	70-130	08.12.2020 17:51		



Certificate of Analytical Results 669822

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **FL 24@2'** Matrix: Soil Date Received: 08.12.2020 11:23
 Lab Sample Id: 669822-002 Date Collected: 08.12.2020 00:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CAC % Moisture:
 Analyst: MAB Date Prep: 08.12.2020 14:37 Basis: Wet Weight
 Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	76.1	9.96	mg/kg	08.12.2020 17:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.12.2020 11:45 Basis: Wet Weight
 Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.12.2020 12:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.12.2020 12:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.12.2020 12:06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.12.2020 12:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	08.12.2020 12:06	
o-Terphenyl	84-15-1	111	%	70-135	08.12.2020 12:06	



Certificate of Analytical Results 669822

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **FL 24@2'**
Lab Sample Id: 669822-002

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.12.2020 18:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.12.2020 18:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.12.2020 18:14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.12.2020 18:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.12.2020 18:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.12.2020 18:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.12.2020 18:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.12.2020 18:14		
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.12.2020 18:14		



Certificate of Analytical Results 669822

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SW1B**
Lab Sample Id: 669822-003

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 14:37

Basis: Wet Weight

Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	99.8	9.96	mg/kg	08.12.2020 18:05		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.12.2020 11:45

Basis: Wet Weight

Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.12.2020 12:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.12.2020 12:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.12.2020 12:26	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.12.2020 12:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	08.12.2020 12:26	
o-Terphenyl	84-15-1	109	%	70-135	08.12.2020 12:26	



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Boone 16 State Com 2H

Sample Id: **SW1B**
Lab Sample Id: 669822-003

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.12.2020 18:36	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.12.2020 18:36	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.12.2020 18:36	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.12.2020 18:36	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.12.2020 18:36	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.12.2020 18:36	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.12.2020 18:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.12.2020 18:36	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.12.2020 18:36	



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Sample Id: **SW2** Matrix: Soil Date Received: 08.12.2020 11:23
 Lab Sample Id: 669822-004 Date Collected: 08.12.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CAC % Moisture:
 Analyst: MAB Date Prep: 08.12.2020 14:37 Basis: Wet Weight
 Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	202	10.1	mg/kg	08.12.2020 18:10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.12.2020 11:45 Basis: Wet Weight
 Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.12.2020 12:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.12.2020 12:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.12.2020 12:47	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.12.2020 12:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	08.12.2020 12:47	
o-Terphenyl	84-15-1	109	%	70-135	08.12.2020 12:47	



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Boone 16 State Com 2H

Sample Id: **SW2**
Lab Sample Id: 669822-004

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.12.2020 18:59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.12.2020 18:59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.12.2020 18:59	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.12.2020 18:59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.12.2020 18:59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.12.2020 18:59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.12.2020 18:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.12.2020 18:59	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.12.2020 18:59	



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Sample Id: **SW3** Matrix: Soil Date Received: 08.12.2020 11:23
 Lab Sample Id: 669822-005 Date Collected: 08.12.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CAC % Moisture:
 Analyst: MAB Date Prep: 08.12.2020 14:37 Basis: Wet Weight
 Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	120	10.0	mg/kg	08.12.2020 18:16		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.12.2020 11:45 Basis: Wet Weight
 Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 13:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	281	50.0	mg/kg	08.12.2020 13:07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 13:07	U	1
Total TPH	PHC635	281	50.0	mg/kg	08.12.2020 13:07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	08.12.2020 13:07	
o-Terphenyl	84-15-1	106	%	70-135	08.12.2020 13:07	



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Boone 16 State Com 2H

Sample Id: **SW3**
Lab Sample Id: 669822-005

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0105	0.0105	mg/kg	08.12.2020 19:21	U	1
Toluene	108-88-3	<0.0105	0.0105	mg/kg	08.12.2020 19:21	U	1
Ethylbenzene	100-41-4	<0.0105	0.0105	mg/kg	08.12.2020 19:21	U	1
m,p-Xylenes	179601-23-1	<0.0211	0.0211	mg/kg	08.12.2020 19:21	U	1
o-Xylene	95-47-6	<0.0105	0.0105	mg/kg	08.12.2020 19:21	U	1
Total Xylenes	1330-20-7	<0.0105	0.0105	mg/kg	08.12.2020 19:21	U	1
Total BTEX		<0.0105	0.0105	mg/kg	08.12.2020 19:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.12.2020 19:21	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.12.2020 19:21	



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Boone 16 State Com 2H

Sample Id: **SW4** Matrix: Soil Date Received: 08.12.2020 11:23
 Lab Sample Id: 669822-006 Date Collected: 08.12.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CAC % Moisture:
 Analyst: MAB Date Prep: 08.12.2020 14:37 Basis: Wet Weight
 Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	418	9.94	mg/kg	08.12.2020 18:33		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.12.2020 11:45 Basis: Wet Weight
 Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 13:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 13:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 13:27	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 13:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	08.12.2020 13:27	
o-Terphenyl	84-15-1	107	%	70-135	08.12.2020 13:27	



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Boone 16 State Com 2H

Sample Id: **SW4**
Lab Sample Id: 669822-006

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.12.2020 19:50	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.12.2020 19:50	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.12.2020 19:50	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.12.2020 19:50	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.12.2020 19:50	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.12.2020 19:50	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.12.2020 19:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.12.2020 19:50	
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.12.2020 19:50	



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Boone 16 State Com 2H

Sample Id: **EW1C**
Lab Sample Id: 669822-007

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 14:37

Basis: Wet Weight

Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	135	9.96	mg/kg	08.12.2020 18:38		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.12.2020 11:45

Basis: Wet Weight

Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.12.2020 13:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.12.2020 13:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.12.2020 13:47	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.12.2020 13:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	137	%	70-135	08.12.2020 13:47	**
o-Terphenyl	84-15-1	125	%	70-135	08.12.2020 13:47	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **EW1C**
Lab Sample Id: 669822-007

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.12.2020 20:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.12.2020 20:17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.12.2020 20:17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.12.2020 20:17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.12.2020 20:17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.12.2020 20:17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.12.2020 20:17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	08.12.2020 20:17		
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.12.2020 20:17		



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **EW2C** Matrix: Soil Date Received: 08.12.2020 11:23
 Lab Sample Id: 669822-008 Date Collected: 08.12.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CAC % Moisture:
 Analyst: MAB Date Prep: 08.12.2020 14:37 Basis: Wet Weight
 Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	142	9.98	mg/kg	08.12.2020 18:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.12.2020 11:45 Basis: Wet Weight
 Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.12.2020 14:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.12.2020 14:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.12.2020 14:08	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.12.2020 14:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	08.12.2020 14:08	
o-Terphenyl	84-15-1	106	%	70-135	08.12.2020 14:08	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **EW2C**
Lab Sample Id: 669822-008

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.12.2020 20:39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.12.2020 20:39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.12.2020 20:39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.12.2020 20:39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.12.2020 20:39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.12.2020 20:39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.12.2020 20:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.12.2020 20:39		
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.12.2020 20:39		



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Boone 16 State Com 2H

Sample Id: **EW3** Matrix: Soil Date Received: 08.12.2020 11:23
 Lab Sample Id: 669822-009 Date Collected: 08.12.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CAC % Moisture:
 Analyst: MAB Date Prep: 08.12.2020 14:37 Basis: Wet Weight
 Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	125	9.96	mg/kg	08.12.2020 18:49		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.12.2020 11:45 Basis: Wet Weight
 Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.12.2020 14:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.12.2020 14:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.12.2020 14:28	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.12.2020 14:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	08.12.2020 14:28	
o-Terphenyl	84-15-1	114	%	70-135	08.12.2020 14:28	



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Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **EW3**
Lab Sample Id: 669822-009

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.12.2020 21:02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.12.2020 21:02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.12.2020 21:02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.12.2020 21:02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.12.2020 21:02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.12.2020 21:02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.12.2020 21:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.12.2020 21:02	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.12.2020 21:02	



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Boone 16 State Com 2H

Sample Id: **WW3** Matrix: Soil Date Received: 08.12.2020 11:23
 Lab Sample Id: 669822-010 Date Collected: 08.12.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CAC % Moisture:
 Analyst: MAB Date Prep: 08.12.2020 14:37 Basis: Wet Weight
 Seq Number: 3134400

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	151	9.92	mg/kg	08.12.2020 18:55		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.12.2020 11:45 Basis: Wet Weight
 Seq Number: 3134308

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.12.2020 14:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.12.2020 14:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.12.2020 14:48	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.12.2020 14:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.12.2020 14:48	
o-Terphenyl	84-15-1	114	%	70-135	08.12.2020 14:48	



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Boone 16 State Com 2H

Sample Id: **WW3**
Lab Sample Id: 669822-010

Matrix: Soil
Date Collected: 08.12.2020 00:00

Date Received: 08.12.2020 11:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: CAC

% Moisture:

Analyst: MAB

Date Prep: 08.12.2020 16:24

Basis: Wet Weight

Seq Number: 3134382

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0370	0.0370	mg/kg	08.12.2020 21:24	U	1
Toluene	108-88-3	<0.0370	0.0370	mg/kg	08.12.2020 21:24	U	1
Ethylbenzene	100-41-4	<0.0370	0.0370	mg/kg	08.12.2020 21:24	U	1
m,p-Xylenes	179601-23-1	<0.0741	0.0741	mg/kg	08.12.2020 21:24	U	1
o-Xylene	95-47-6	<0.0370	0.0370	mg/kg	08.12.2020 21:24	U	1
Total Xylenes	1330-20-7	<0.0370	0.0370	mg/kg	08.12.2020 21:24	U	1
Total BTEX		<0.0370	0.0370	mg/kg	08.12.2020 21:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.12.2020 21:24	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.12.2020 21:24	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Etech Environmental & Safety Solution, Inc

Boone 16 State Com 2H

Analytical Method: Chloride by EPA 300

Seq Number: 3134400

MB Sample Id: 7709319-1-BLK

Matrix: Solid

LCS Sample Id: 7709319-1-BKS

Prep Method: E300P

Date Prep: 08.12.2020

LCSD Sample Id: 7709319-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	267	107	267	107	90-110	0	20	mg/kg	08.12.2020 17:31	

Analytical Method: Chloride by EPA 300

Seq Number: 3134400

Parent Sample Id: 669822-001

Matrix: Soil

MS Sample Id: 669822-001 S

Prep Method: E300P

Date Prep: 08.12.2020

MSD Sample Id: 669822-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	465	199	668	102	668	102	90-110	0	20	mg/kg	08.12.2020 17:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3134400

Parent Sample Id: 669856-001

Matrix: Soil

MS Sample Id: 669856-001 S

Prep Method: E300P

Date Prep: 08.12.2020

MSD Sample Id: 669856-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6320	201	6500	90	6520	100	90-110	0	20	mg/kg	08.12.2020 19:06	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134308

MB Sample Id: 7709269-1-BLK

Matrix: Solid

LCS Sample Id: 7709269-1-BKS

Prep Method: SW8015P

Date Prep: 08.11.2020

LCSD Sample Id: 7709269-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1020	102	1040	104	70-135	2	35	mg/kg	08.12.2020 07:21	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	1080	108	70-135	3	35	mg/kg	08.12.2020 07:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		124		125		70-135	%	08.12.2020 07:21
o-Terphenyl	106		115		116		70-135	%	08.12.2020 07:21

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134308

Matrix: Solid

MB Sample Id: 7709269-1-BLK

Prep Method: SW8015P

Date Prep: 08.11.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.12.2020 07:01	

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

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

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

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



Etech Environmental & Safety Solution, Inc

Boone 16 State Com 2H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134308

Parent Sample Id: 669624-124

Matrix: Soil

MS Sample Id: 669624-124 S

Prep Method: SW8015P

Date Prep: 08.11.2020

MSD Sample Id: 669624-124 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1010	101	1020	103	70-135	1	35	mg/kg	08.12.2020 08:23	
Diesel Range Organics (DRO)	<50.2	1000	1020	102	1050	106	70-135	3	35	mg/kg	08.12.2020 08:23	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		131		70-135	%	08.12.2020 08:23
o-Terphenyl	117		123		70-135	%	08.12.2020 08:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134382

MB Sample Id: 7709315-1-BLK

Matrix: Solid

LCS Sample Id: 7709315-1-BKS

Prep Method: SW5035A

Date Prep: 08.12.2020

LCSD Sample Id: 7709315-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.108	108	70-130	5	35	mg/kg	08.12.2020 15:48	
Toluene	<0.00200	0.100	0.107	107	0.102	102	70-130	5	35	mg/kg	08.12.2020 15:48	
Ethylbenzene	<0.00200	0.100	0.0992	99	0.0950	95	71-129	4	35	mg/kg	08.12.2020 15:48	
m,p-Xylenes	<0.00400	0.200	0.200	100	0.193	97	70-135	4	35	mg/kg	08.12.2020 15:48	
o-Xylene	<0.00200	0.100	0.0998	100	0.0964	96	71-133	3	35	mg/kg	08.12.2020 15:48	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		98		70-130	%	08.12.2020 15:48
4-Bromofluorobenzene	100		104		103		70-130	%	08.12.2020 15:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134382

Parent Sample Id: 669822-001

Matrix: Soil

MS Sample Id: 669822-001 S

Prep Method: SW5035A

Date Prep: 08.12.2020

MSD Sample Id: 669822-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.117	117	0.0992	99	70-130	16	35	mg/kg	08.12.2020 16:33	
Toluene	<0.00200	0.0998	0.111	111	0.0920	92	70-130	19	35	mg/kg	08.12.2020 16:33	
Ethylbenzene	<0.00200	0.0998	0.103	103	0.0817	82	71-129	23	35	mg/kg	08.12.2020 16:33	
m,p-Xylenes	<0.00399	0.200	0.207	104	0.162	81	70-135	24	35	mg/kg	08.12.2020 16:33	
o-Xylene	<0.00200	0.0998	0.103	103	0.0810	81	71-133	24	35	mg/kg	08.12.2020 16:33	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	08.12.2020 16:33
4-Bromofluorobenzene	108		104		70-130	%	08.12.2020 16:33

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

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

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

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



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0200, San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
 Atlanta, GA (770) 449-8800

Work Order No.:

1631 / 245.1 / 7470 / 7471 : Hg
 1631 / 245.1 / 7470 / 7471 : Hg
 1631 / 245.1 / 7470 / 7471 : Hg

Project Manager:	Joel Lowry	Bill to: (if different)	
Company Name:	Elect Environmental & Safety	Company Name:	LOG
Address:	3100 Plains Highway	Address:	
City, State ZIP:	Livingston, NM, 88260	City, State ZIP:	
Phone:	575-396-2378	Email:	Email Results to PM@electenv.com + Client
Project Name:	Bacone State Cor 2H	Turn Around	
Project Number:	12821	Routine:	☐
Project Location:	Lea County, NM	Rush:	☒
Sample's Name:	Miguel Ramirez	Due Date:	
PO #:			

ANALYSIS REQUEST

Program:	UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:	
Reporting Level:	☐ Level I ☐ Level II ☐ Level III ☐ Level IV ☐
Deliverables:	EDD ☐ ADAPT ☐ Other: ☐

Temperature (°C):	20.0 / 18.8	Temp Blank:	Yes ☒ No ☐	Well Ice:	Yes ☐ No ☒
Received Inact:	Yes ☒ No ☐	Thermometer ID	T-VM-004		
Cooler Custody Seals:	Yes ☒ No ☐	Correction Factor:	-0.2		
Sample Custody Seals:	Yes ☒ No ☐	Total Containers:	10		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride E300	BTEX 8021	TPH Modified Ext	TPH TX1005	Preservative Codes	Sample Comments
EL2304'	Soil	8-12-20		4'		X	X	X		HN	
EL2402'	Soil	8-12-20		2'		X	X	X		H2SO4: H2	
SW1B	Soil	8-12-20				X	X	X		HCL: HL	
SW2	Soil	8-12-20				X	X	X		None: NO	
SW3	Soil	8-12-20				X	X	X		NaOH: Na	
SW4	Soil	8-12-20				X	X	X		MeOH: Me	
EW1C	Soil	8-12-20				X	X	X		Zn Acetate+ NaOH: Zn	
EW2C	Soil	8-12-20				X	X	X			
EW3	Soil	8-12-20				X	X	X			
WW3	Soil	8-12-20				X	X	X			

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco but not analyzed. These terms will be enforced unless previously negotiated.

1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental & Safety Solution, I

Date/ Time Received: 08.12.2020 11.23.00 AM

Work Order #: 669822

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	18.8	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	Additional cooling process began in lab after receipt and processing of samples.
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	Samples received in bulk containers.
#13 Samples properly preserved?	Yes	Additional cooling process began in lab after receipt and processing of samples.
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 08.12.2020

Checklist reviewed by:



Jessica Kramer

Date: 08.12.2020

Certificate of Analysis Summary 670079

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Boone 16 State Com 2H

Project Id: 12881
Contact: PM
Project Location: Lea County NM

Date Received in Lab: Fri 08.14.2020 10:23
Report Date: 08.14.2020 16:01
Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 670079-001 Field Id: SW3B Depth: Matrix: SOIL Sampled: 08.14.2020 00:00	Lab Id: 670079-002 Field Id: WW1B Depth: Matrix: SOIL Sampled: 08.14.2020 00:00	Lab Id: 670079-003 Field Id: FL13@4 Depth: 4- ft Matrix: SOIL Sampled: 08.14.2020 00:00			
Chloride by EPA 300	Extracted: Analyzed: Units/RL:			08.14.2020 12:00 08.14.2020 13:02 mg/kg RL		
Chloride				13.7 10.0		
TPH by SW8015 Mod	Extracted: Analyzed: Units/RL:	08.14.2020 12:30 08.14.2020 13:28 mg/kg RL	08.14.2020 12:30 08.14.2020 14:29 mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.2 50.2			
Diesel Range Organics (DRO)		<50.1 50.1	<50.2 50.2			
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.2 50.2			
Total TPH		<50.1 50.1	<50.2 50.2			

BRL - Below Reporting Limit

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





Analytical Report 670079

for

Etech Environmental & Safety Solution, Inc

Project Manager: PM

Boone 16 State Com 2H

12881

08.14.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.14.2020

Project Manager: **PM**

Etech Environmental & Safety Solution, Inc

P.O. Box 62228

Midland, TX 79711

Reference: Eurofins Xenco, LLC Report No(s): **670079**

Boone 16 State Com 2H

Project Address: Lea County NM

PM :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 670079. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 670079 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 670079****Etech Environmental & Safety Solution, Inc, Midland, TX**

Boone 16 State Com 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW3B	S	08.14.2020 00:00	ft	670079-001
WW1B	S	08.14.2020 00:00	ft	670079-002
FL13@4	S	08.14.2020 00:00	4 ft	670079-003



CASE NARRATIVE

Client Name: Etech Environmental & Safety Solution, Inc

Project Name: Boone 16 State Com 2H

Project ID: 12881
Work Order Number(s): 670079

Report Date: 08.14.2020
Date Received: 08.14.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 670079

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **SW3B**
Lab Sample Id: 670079-001

Matrix: Soil
Date Collected: 08.14.2020 00:00

Date Received: 08.14.2020 10:23

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.14.2020 12:30

Basis: Wet Weight

Seq Number: 3134621

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.14.2020 13:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.14.2020 13:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.14.2020 13:28	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.14.2020 13:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.14.2020 13:28	
o-Terphenyl	84-15-1	89	%	70-135	08.14.2020 13:28	



Certificate of Analytical Results 670079

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State Com 2H

Sample Id: **WW1B**
Lab Sample Id: 670079-002

Matrix: Soil
Date Collected: 08.14.2020 00:00

Date Received: 08.14.2020 10:23

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 08.14.2020 12:30

Basis: Wet Weight

Seq Number: 3134621

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.14.2020 14:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.14.2020 14:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.14.2020 14:29	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.14.2020 14:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.14.2020 14:29	
o-Terphenyl	84-15-1	91	%	70-135	08.14.2020 14:29	

**Certificate of Analytical Results 670079****Etech Environmental & Safety Solution, Inc, Midland, TX**

Boone 16 State Com 2H

Sample Id: **FL13@4**
Lab Sample Id: 670079-003

Matrix: Soil
Date Collected: 08.14.2020 00:00

Date Received: 08.14.2020 10:23
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.14.2020 12:00

Basis: Wet Weight

Seq Number: 3134602

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.7	10.0	mg/kg	08.14.2020 13:02		1

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Etech Environmental & Safety Solution, Inc

Boone 16 State Com 2H

Analytical Method: Chloride by EPA 300

Seq Number: 3134602

MB Sample Id: 7709464-1-BLK

Matrix: Solid

LCS Sample Id: 7709464-1-BKS

Prep Method: E300P

Date Prep: 08.14.2020

LCSD Sample Id: 7709464-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	263	105	90-110	1	20	mg/kg	08.14.2020 12:29	

Analytical Method: Chloride by EPA 300

Seq Number: 3134602

Parent Sample Id: 670079-003

Matrix: Soil

MS Sample Id: 670079-003 S

Prep Method: E300P

Date Prep: 08.14.2020

MSD Sample Id: 670079-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.7	200	208	97	211	99	90-110	1	20	mg/kg	08.14.2020 14:18	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134621

MB Sample Id: 7709490-1-BLK

Matrix: Solid

LCS Sample Id: 7709490-1-BKS

Prep Method: SW8015P

Date Prep: 08.14.2020

LCSD Sample Id: 7709490-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	890	89	887	89	70-135	0	35	mg/kg	08.14.2020 12:27	
Diesel Range Organics (DRO)	<50.0	1000	916	92	935	94	70-135	2	35	mg/kg	08.14.2020 12:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		115		114		70-135	%	08.14.2020 12:27
o-Terphenyl	100		102		104		70-135	%	08.14.2020 12:27

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134621

Matrix: Solid

MB Sample Id: 7709490-1-BLK

Prep Method: SW8015P

Date Prep: 08.14.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.14.2020 13:08	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134621

Matrix: Soil

Parent Sample Id: 670079-001

MS Sample Id: 670079-001 S

Prep Method: SW8015P

Date Prep: 08.14.2020

MSD Sample Id: 670079-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	901	90	883	88	70-135	2	35	mg/kg	08.14.2020 13:49	
Diesel Range Organics (DRO)	<50.0	999	932	93	915	92	70-135	2	35	mg/kg	08.14.2020 13:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		104		70-135	%	08.14.2020 13:49
o-Terphenyl	98		96		70-135	%	08.14.2020 13:49

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

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

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

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



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440, El Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3189, Phoenix, AZ (480) 355-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
 Atlanta, GA (770) 449-8800

Work Order No: 676079www.xenco.com Page 1 of 1

Project Manager:	Joel Lowry	Bill to: (if different)	
Company Name:	Elect Environmental & Safety	Company Name:	<u>COG</u>
Address:	3100 Plains Highway	Address:	
City, State ZIP:	Lovington, NM, 88260	City, State ZIP:	
Phone:	575-396-2378	Email:	Email Results to PM@electenvy.com + Client
Project Name:	<u>Boone / 6 State can 24</u>	Turn Around	
Project Number:	<u>12881</u>	Routine:	☐
Project Location:	<u>Lee County, NM</u>	Rush:	☒
Sampler's Name:	<u>Miguel Ramirez</u>	Due Date:	
PO #:			

SAMPLE RECEIPT	Temp Blank:	☒ Yes	☐ No	Wet Ice:	☒ Yes	☐ No
	Temperature (°C):	<u>4.0/3.8</u>	Thermometer ID			
	Received Intact:	☒ Yes	☐ No			
	Cooler Custody Seals:	☒ Yes	☐ No	Correction Factor:	<u>-0.0</u>	
	Sample Custody Seals:	☒ Yes	☐ No	Total Containers:	<u>0.0</u>	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth
<u>SW3B</u>	<u>Soil</u>	<u>8-14-20</u>		<u>1</u>
<u>WW1B</u>	<u>Soil</u>	<u>8-14-20</u>		<u>1</u>
<u>FL1304</u>	<u>Soil</u>	<u>8-14-20</u>		<u>4</u>

Number of Containers/Preservative Code

Chloride E300

BTEX 8021

TPH Modified Ext

TPH TX1005

ANALYSIS REQUEST

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level: ☐ Level I ☐ PST/US ☐ TRR ☐ Level II ☐
Deliverables: EDD ☐ ADAPT ☐ Other: ☐

Preservative Codes

HNO3: HN

H2SO4: H2

HCL: HL

None: NO

NaOH: Na

MeOH: Me

Zn Acetate+ NaOH: Zn

TAT starts the day received by the lab. If received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$7500 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental & Safety Solution, I

Date/ Time Received: 08.14.2020 01.23.00 AM

Work Order #: 670079

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

SP13 is Sample 3 on jars COC is correct

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 08.14.2020

Checklist reviewed by:



Jessica Kramer

Date: 08.14.2020

Certificate of Analysis Summary 670082

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Boone 16 State com 2H

Project Id: 12881
Contact: PM
Project Location: Lea County

Date Received in Lab: Fri 08.14.2020 10:23
Report Date: 09.03.2020 08:55
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	670082-001	670082-002				
	Field Id:	Flare @ 1'	Flare @ 4'				
	Depth:	1- ft	4- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	08.14.2020 00:00	08.14.2020 00:00				
BTEX by EPA 8021B	Extracted:	08.14.2020 12:47	08.14.2020 12:47				
	Analyzed:	08.15.2020 01:14	08.15.2020 01:37				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00199 0.00199	<0.00200 0.00200				
	Toluene	<0.00199 0.00199	<0.00200 0.00200				
	Ethylbenzene	<0.00199 0.00199	<0.00200 0.00200				
	m,p-Xylenes	<0.00398 0.00398	<0.00401 0.00401				
	o-Xylene	<0.00199 0.00199	<0.00200 0.00200				
	Total Xylenes	<0.00199 0.00199	<0.00200 0.00200				
	Total BTEX	<0.00199 0.00199	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	08.14.2020 12:00	08.14.2020 12:00				
	Analyzed:	08.14.2020 16:32	08.14.2020 16:38				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	15400 500	207 9.98				
TPH by SW8015 Mod	Extracted:	08.14.2020 12:30	08.14.2020 12:30				
	Analyzed:	08.14.2020 15:29	08.14.2020 15:50				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<50.1 50.1	<49.9 49.9				
	Diesel Range Organics (DRO)	<50.1 50.1	<49.9 49.9				
	Motor Oil Range Hydrocarbons (MRO)	<50.1 50.1	<49.9 49.9				
	Total TPH	<50.1 50.1	<49.9 49.9				

BRL - Below Reporting Limit

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





Environment Testing
Xenco

Analytical Report 670082

for

Etech Environmental & Safety Solution, Inc

Project Manager: PM

Boone 16 State com 2H

12881

09.03.2020

Collected By: Client

**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



09.03.2020

Project Manager: **PM**

Etech Environmental & Safety Solution, Inc

P.O. Box 62228

Midland, TX 79711

Reference: Eurofins Xenco, LLC Report No(s): **670082**

Boone 16 State com 2H

Project Address: Lea County

PM :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 670082. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 670082 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 670082

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State com 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Flare @ 1'	S	08.14.2020 00:00	1 ft	670082-001
Flare @ 4'	S	08.14.2020 00:00	4 ft	670082-002



CASE NARRATIVE

Client Name: Etech Environmental & Safety Solution, Inc

Project Name: Boone 16 State com 2H

Project ID: 12881
Work Order Number(s): 670082

Report Date: 09.03.2020
Date Received: 08.14.2020

Sample receipt non conformances and comments:

V1.001 revision (client email) Corrected sample ID

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 670082

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State com 2H

Sample Id: **Flare @ 1'** Matrix: Soil Date Received: 08.14.2020 10:23
 Lab Sample Id: 670082-001 Date Collected: 08.14.2020 00:00 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.14.2020 12:00 Basis: Wet Weight
 Seq Number: 3134602

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15400	500	mg/kg	08.14.2020 16:32		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.14.2020 12:30 Basis: Wet Weight
 Seq Number: 3134621

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.14.2020 15:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.14.2020 15:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.14.2020 15:29	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.14.2020 15:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.14.2020 15:29	
o-Terphenyl	84-15-1	90	%	70-135	08.14.2020 15:29	



Certificate of Analytical Results 670082

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State com 2H

Sample Id: **Flare @ 1'**

Matrix: Soil

Date Received: 08.14.2020 10:23

Lab Sample Id: 670082-001

Date Collected: 08.14.2020 00:00

Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.14.2020 12:47

Basis: Wet Weight

Seq Number: 3134693

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.15.2020 01:14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.15.2020 01:14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.15.2020 01:14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.15.2020 01:14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.15.2020 01:14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.15.2020 01:14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.15.2020 01:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.15.2020 01:14	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.15.2020 01:14	



Certificate of Analytical Results 670082

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State com 2H

Sample Id: **Flare @ 4'** Matrix: Soil Date Received: 08.14.2020 10:23
 Lab Sample Id: 670082-002 Date Collected: 08.14.2020 00:00 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.14.2020 12:00 Basis: Wet Weight
 Seq Number: 3134602

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	207	9.98	mg/kg	08.14.2020 16:38		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.14.2020 12:30 Basis: Wet Weight
 Seq Number: 3134621

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.14.2020 15:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.14.2020 15:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.14.2020 15:50	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.14.2020 15:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	08.14.2020 15:50	
o-Terphenyl	84-15-1	85	%	70-135	08.14.2020 15:50	



Certificate of Analytical Results 670082

Etech Environmental & Safety Solution, Inc, Midland, TX

Boone 16 State com 2H

Sample Id: **Flare @ 4'**

Matrix: Soil

Date Received: 08.14.2020 10:23

Lab Sample Id: 670082-002

Date Collected: 08.14.2020 00:00

Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.14.2020 12:47

Basis: Wet Weight

Seq Number: 3134693

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.15.2020 01:37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.15.2020 01:37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.15.2020 01:37	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.15.2020 01:37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.15.2020 01:37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.15.2020 01:37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.15.2020 01:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.15.2020 01:37		
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.15.2020 01:37		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Etech Environmental & Safety Solution, Inc

Boone 16 State com 2H

Analytical Method: Chloride by EPA 300

Seq Number: 3134602

MB Sample Id: 7709464-1-BLK

Matrix: Solid

LCS Sample Id: 7709464-1-BKS

Prep Method: E300P

Date Prep: 08.14.2020

LCSD Sample Id: 7709464-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	263	105	90-110	1	20	mg/kg	08.14.2020 12:29	

Analytical Method: Chloride by EPA 300

Seq Number: 3134602

Parent Sample Id: 670038-004

Matrix: Soil

MS Sample Id: 670038-004 S

Prep Method: E300P

Date Prep: 08.14.2020

MSD Sample Id: 670038-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10900	198	11100	101	11100	101	90-110	0	20	mg/kg	08.14.2020 16:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3134602

Parent Sample Id: 670079-003

Matrix: Soil

MS Sample Id: 670079-003 S

Prep Method: E300P

Date Prep: 08.14.2020

MSD Sample Id: 670079-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.7	200	208	97	211	99	90-110	1	20	mg/kg	08.14.2020 14:18	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134621

MB Sample Id: 7709490-1-BLK

Matrix: Solid

LCS Sample Id: 7709490-1-BKS

Prep Method: SW8015P

Date Prep: 08.14.2020

LCSD Sample Id: 7709490-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	890	89	887	89	70-135	0	35	mg/kg	08.14.2020 12:27	
Diesel Range Organics (DRO)	<50.0	1000	916	92	935	94	70-135	2	35	mg/kg	08.14.2020 12:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		115		114		70-135	%	08.14.2020 12:27
o-Terphenyl	100		102		104		70-135	%	08.14.2020 12:27

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134621

Matrix: Solid

MB Sample Id: 7709490-1-BLK

Prep Method: SW8015P

Date Prep: 08.14.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.14.2020 13:08	

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

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

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

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



Etech Environmental & Safety Solution, Inc

Boone 16 State com 2H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134621

Parent Sample Id: 670079-001

Matrix: Soil

MS Sample Id: 670079-001 S

Prep Method: SW8015P

Date Prep: 08.14.2020

MSD Sample Id: 670079-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	901	90	883	88	70-135	2	35	mg/kg	08.14.2020 13:49	
Diesel Range Organics (DRO)	<50.0	999	932	93	915	92	70-135	2	35	mg/kg	08.14.2020 13:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		104		70-135	%	08.14.2020 13:49
o-Terphenyl	98		96		70-135	%	08.14.2020 13:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134693

MB Sample Id: 7709453-1-BLK

Matrix: Solid

LCS Sample Id: 7709453-1-BKS

Prep Method: SW5035A

Date Prep: 08.14.2020

LCSD Sample Id: 7709453-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.110	110	0.101	101	70-130	9	35	mg/kg	08.14.2020 14:03	
Toluene	<0.00200	0.100	0.105	105	0.0961	96	70-130	9	35	mg/kg	08.14.2020 14:03	
Ethylbenzene	<0.00200	0.100	0.0978	98	0.0893	89	71-129	9	35	mg/kg	08.14.2020 14:03	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.181	91	70-135	9	35	mg/kg	08.14.2020 14:03	
o-Xylene	<0.00200	0.100	0.0981	98	0.0896	90	71-133	9	35	mg/kg	08.14.2020 14:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		98		70-130	%	08.14.2020 14:03
4-Bromofluorobenzene	93		98		98		70-130	%	08.14.2020 14:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134693

Parent Sample Id: 669976-001

Matrix: Soil

MS Sample Id: 669976-001 S

Prep Method: SW5035A

Date Prep: 08.14.2020

MSD Sample Id: 669976-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.105	105	0.105	105	70-130	0	35	mg/kg	08.15.2020 01:59	
Toluene	<0.00199	0.0996	0.100	100	0.0999	100	70-130	0	35	mg/kg	08.15.2020 01:59	
Ethylbenzene	<0.00199	0.0996	0.0958	96	0.0926	93	71-129	3	35	mg/kg	08.15.2020 01:59	
m,p-Xylenes	<0.00398	0.199	0.188	94	0.188	94	70-135	0	35	mg/kg	08.15.2020 01:59	
o-Xylene	<0.00199	0.0996	0.0936	94	0.0933	94	71-133	0	35	mg/kg	08.15.2020 01:59	

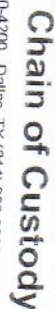
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	08.15.2020 01:59
4-Bromofluorobenzene	101		99		70-130	%	08.15.2020 01:59

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

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

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

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



Work Order No: 67682

Work Order Comments

Program: UST/PT ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting Level I ☐ Level II ☐ PST/US ☐ TRRI ☐ Level II ☐

Deliverables: EDD ☐ ADAPT ☐ Other:

ANALYSIS REQUESTPreservative Codes

Sample Comments

Sample Comments

8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Cu	Fe	Pb	Mg	Mn	Mo	Ni	P	S	V	Zn
-------	-------	----------	----	----	----	----	----	---	----	----	----	----	----	----	----	----	----	----	---	---	---	----

TCLP / SPLP 6010: 8RCBA Sh As Ba Be B Cd Ca Cl Co Cu Fe Pb Mg Mn Mo N

Signature of this document and relinquishment of samples constitutes a valid purchase order from client to Xerox. Xerox will be liable for the cost of the samples.

1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Reinquished by: (Signature)

Received by: (Signature)

Date/Time

2

[illegible]

1

1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental & Safety Solution, I

Date/ Time Received: 08.14.2020 10.23.00 AM

Work Order #: 670082

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 08.14.2020

Checklist reviewed by:



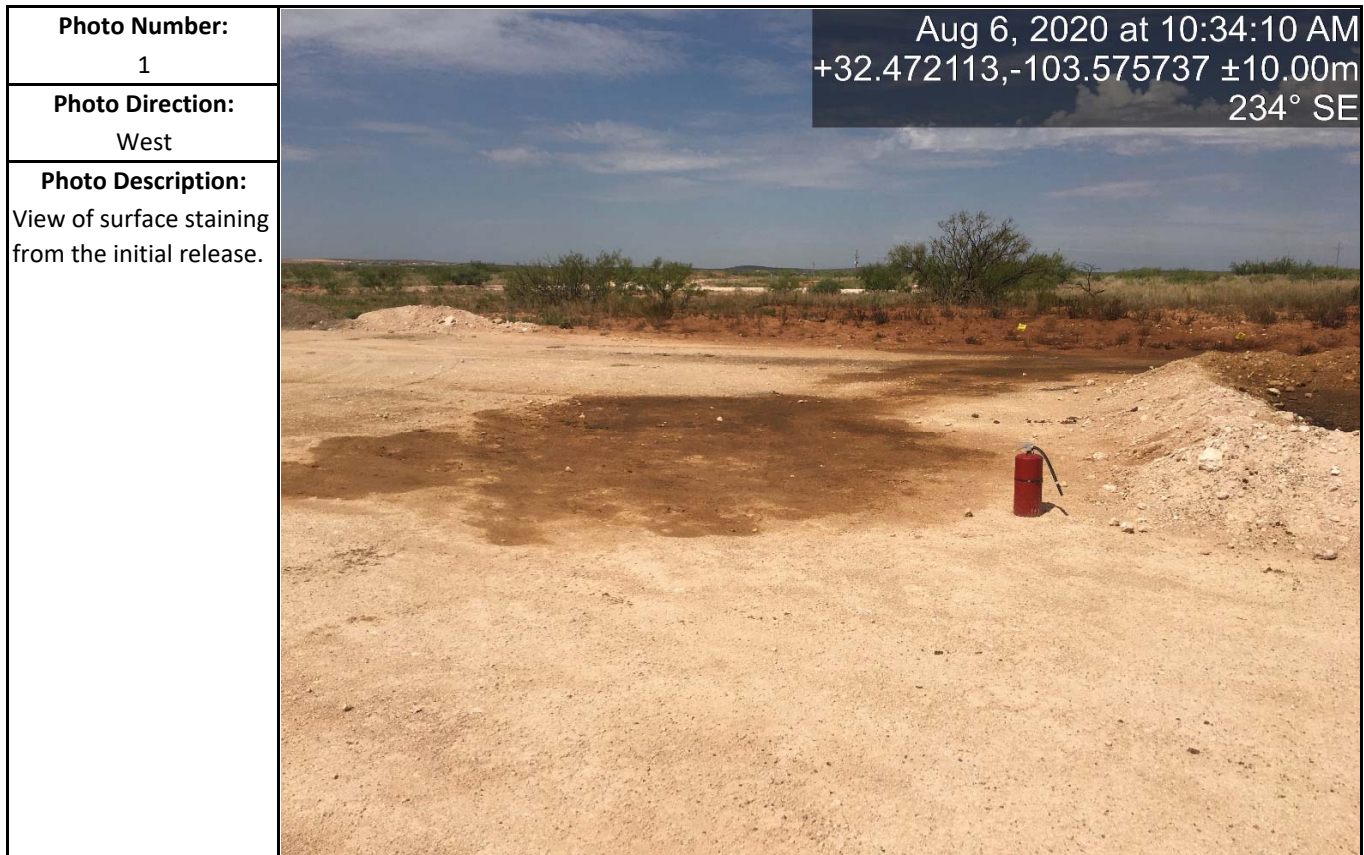
Jessica Kramer

Date: 08.14.2020

Appendix D

Photographic Log

Photographic Log



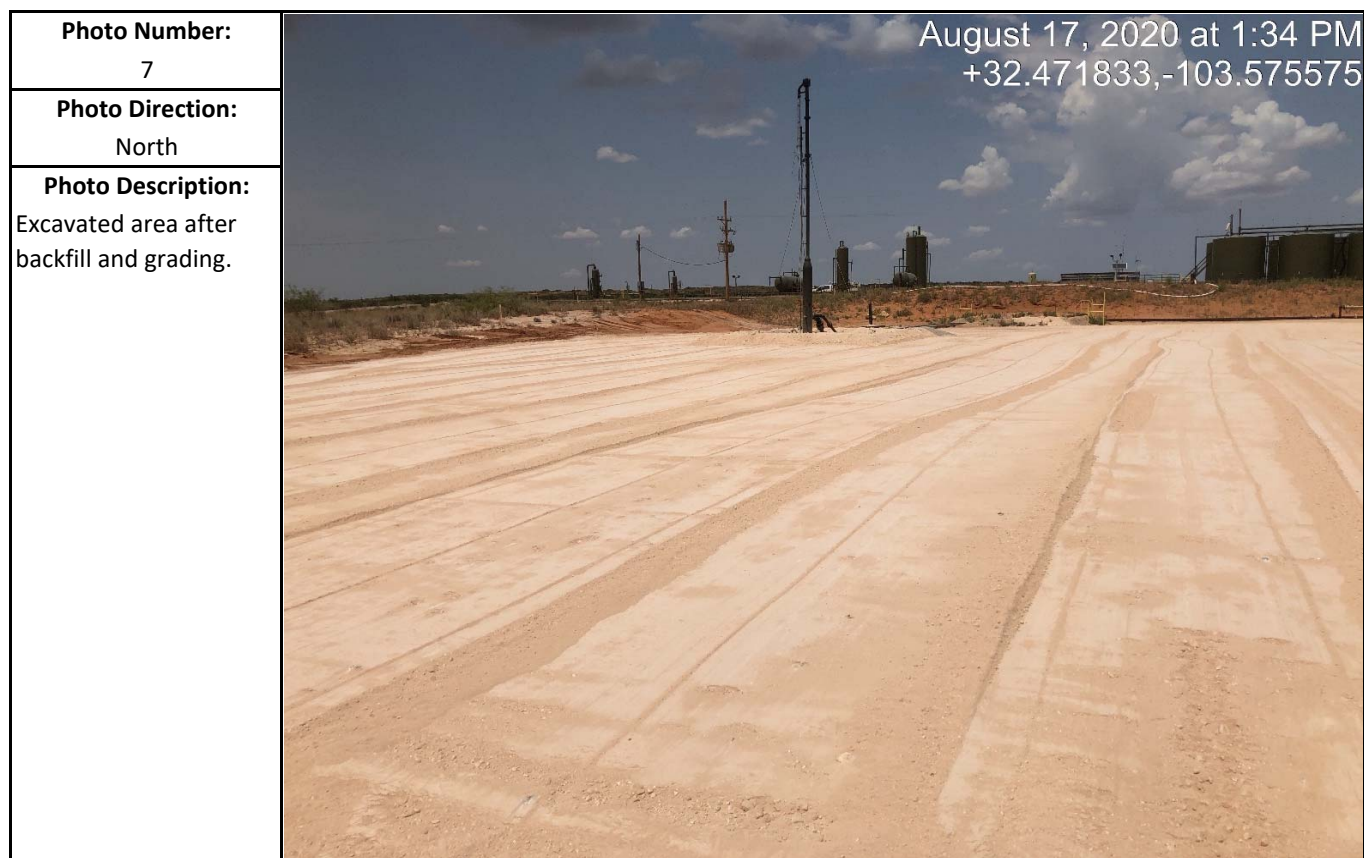
Photographic Log



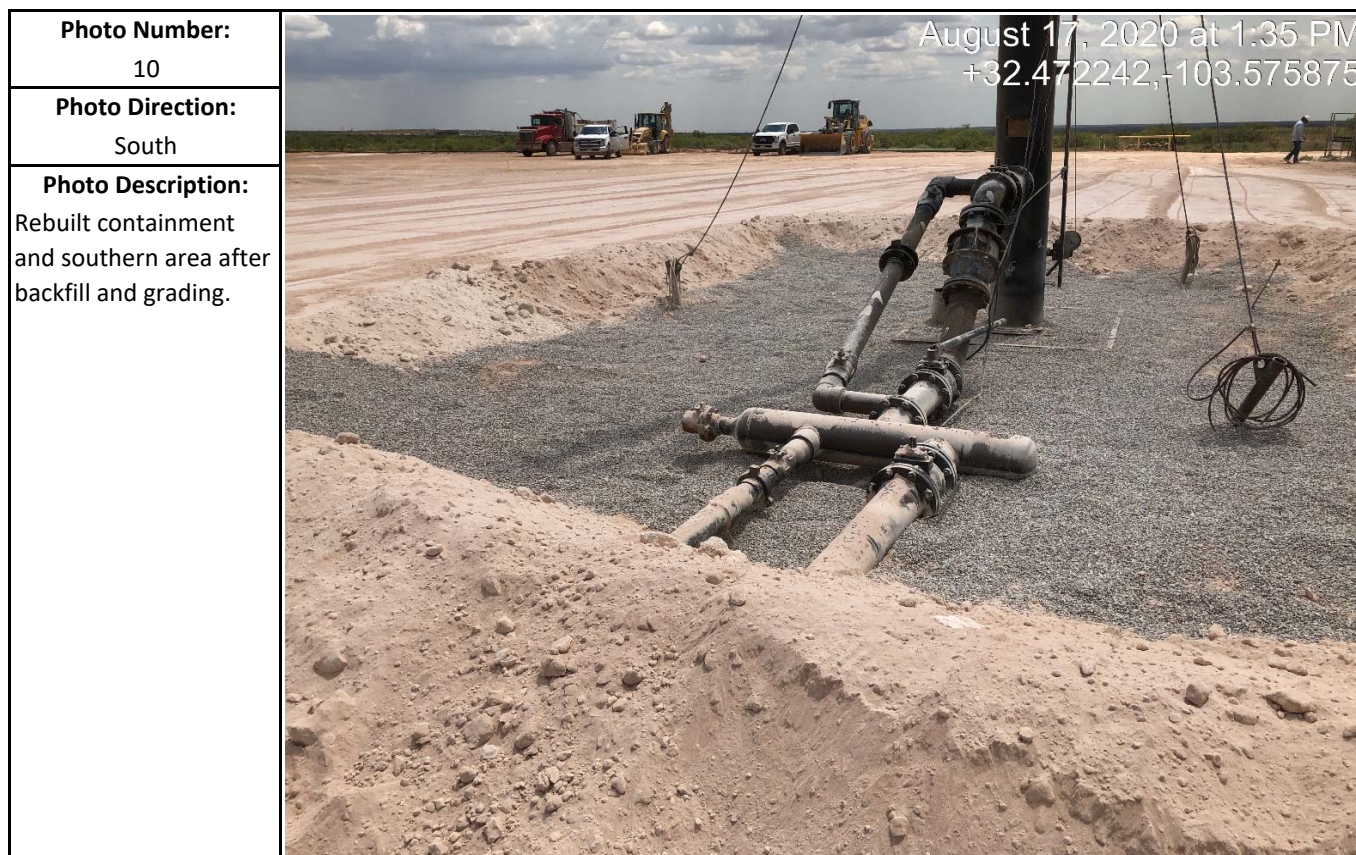
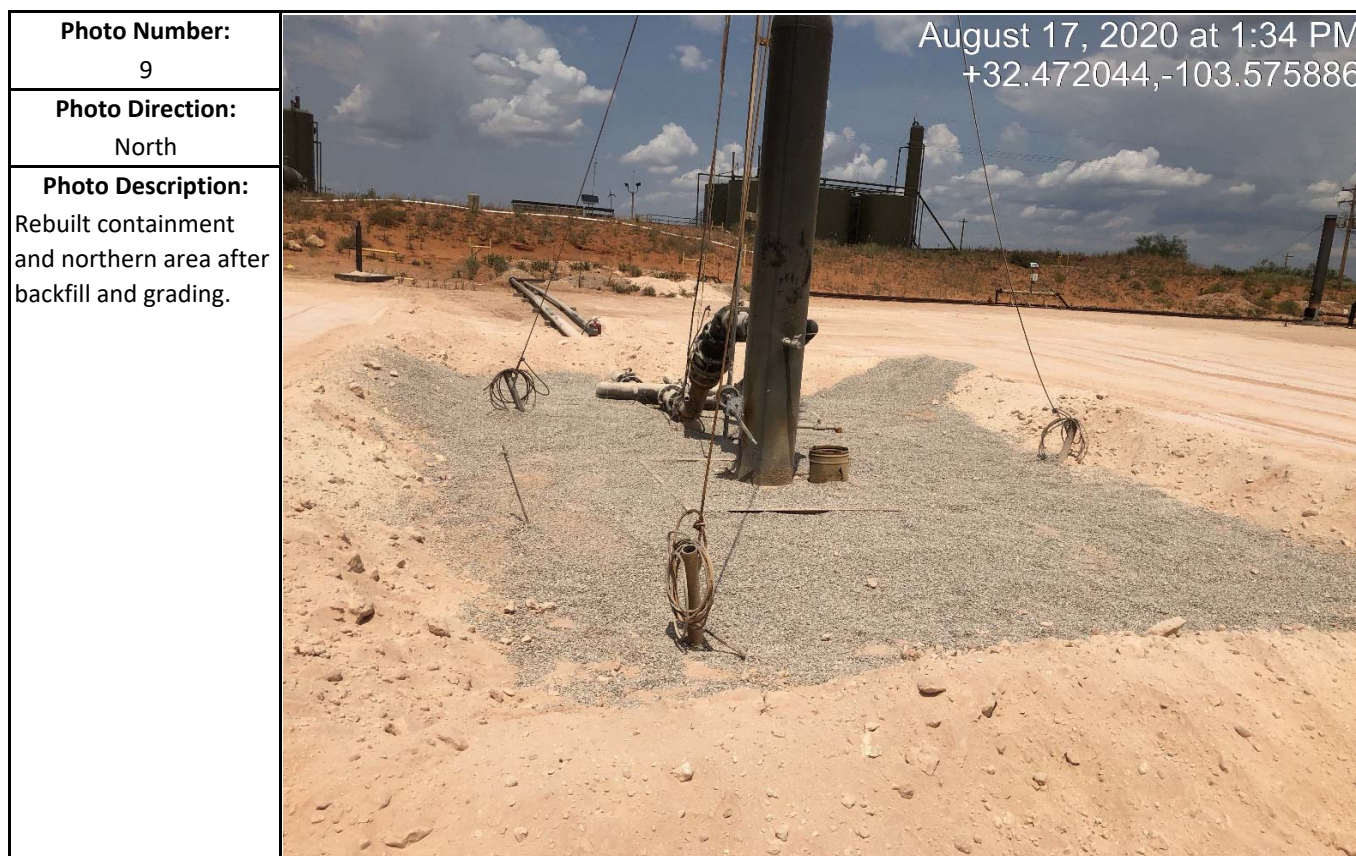
Photographic Log



Photographic Log



Photographic Log



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

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

CONDITIONS

Action 11011

CONDITIONS OF APPROVAL

Operator:	COG OPERATING LLC	600 W Illinois Ave	Midland, TX79701	OGRID:	229137	Action Number:	11011	Action Type:	C-141
OCD Reviewer	Condition								
ceads	None								