

Incident ID	NRM2002160255
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>&lt;50 ft</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

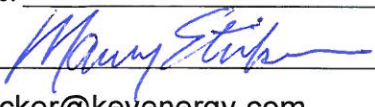
### **Characterization Report Checklist:** *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 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.

Incident ID	NRM2002160255
District RP	
Facility ID	
Application ID	

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

Printed Name: Maury Sticker Title: Environmental Director  
Signature:  Date: 1/22/2020  
email: msticker@keyenergy.com Telephone: 713-651-2461

**OCD Only**

Received by: Cristina Eads Date: 03/17/2020

Incident ID	NRM2002160255
District RP	
Facility ID	
Application ID	

## Closure

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

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

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

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

Printed Name: Maury Sticker

Title: Environmental Director

Signature: 

Date: 1/22/2020

email: msticker@keyenergy.com

Telephone: 713-651-2461

### OCD Only

Received by: Cristina Eads

Date: 03/17/2020

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: 03/17/2020

Printed Name: Cristina Eads

Title: Environmental Specialist

# Remediation Summary and Soil Closure Request

## Key Energy Services White's City Rd. Incident

Eddy County, New Mexico  
Unit Letter "C", Section 8, Township 26 South, Range 28 East  
Latitude 32.06398 North, Longitude 104.11151 West  
**NMOCD Reference No. 2RP-pending**

Prepared By:

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



Daniel Dominguez



Joel W. Lowry





## TABLE OF CONTENTS

	<i>Section</i>
PROJECT INFORMATION.....	<b>1.0</b>
SITE CHARACTERIZATION.....	<b>2.0</b>
CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE.....	<b>3.0</b>
REMEDIATION ACTIVITIES SUMMARY.....	<b>4.0</b>
RESTORATION, RECLAMATION AND RE-VEGETATION PLAN.....	<b>5.0</b>
SOIL CLOSURE REQUEST.....	<b>6.0</b>
LIMITATIONS.....	<b>7.0</b>
DISTRIBUTION.....	<b>8.0</b>

### FIGURES

- Figure 1 - Topographic Map
- Figure 2 - Aerial Proximity Map
- Figure 3 - Site & Sample Location Map

### TABLES

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

### APPENDICES

- Appendix A - Depth to Groundwater Information
- Appendix B - Field Data and Soil Profile Logs
- Appendix C - Laboratory Analytical Reports
- Appendix D - Photographic Log

**1.0 PROJECT INFORMATION**

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Key Energy Services, has prepared this Remediation Summary and Soil Closure Request for the Release Site known as the White's City Rd. Incident. Details of the release are summarized below:

**Location of Release Source**

Latitude: 32.06398 Longitude: -104.11151

Provided GPS are in WGS84 format.

Site Name: <u>White's City Rd. Incident</u>	Site Type: <u>Right-of-Way</u>
Date Release Discovered: <u>11/17/2019</u>	API # (if applicable):

Unit Letter	Section	Township	Range	County
"C"	8	26S	28E	Eddy

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

**Nature and Volume of Release**

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) <u>120</u>	Volume Recovered (bbls) <u>3</u>
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released	Volume/Weight Recovered

**Cause of Release:**

The release was a result of a water transport truck being involved in single vehicle traffic accident.

**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?	<b>&lt;50 Ft.</b>	
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

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
<50 Ft.	Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	100 mg/kg
	DRO + GRO	EPA SW-846 Method 8015M	N/A 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 **November 20, 2019**, Etech conducted an initial site assessment. During the initial site assessment, a series of hand-augered soil bores (**SP1 through SP3**) were advanced within the release margins in an effort to determine the vertical extent of soil impacts. In addition, hand-augered soil bores were advanced at the inferred edges of the affected area in an effort to determine the horizontal extent of soil impacts. During the advancement of the hand-augered soil bores, field soil samples were collected and field-screened for concentrations of chloride utilizing a Hach Quantab® chloride test kit. A "Site & Sample Location Map" is provided as Figure 3. Field data and soil profile logs, if applicable, are provided as Appendix B.

Based on field observations and field test data, **eighteen (18)** delineation soil samples (**SP1 @ S, SP1 @ 1', SP2 @ S, SP2 @ 3', SP3 @ S, SP3 @ 3', EH1 @ S, EH1 @ 1', NH1 @ S, NH1 @ 1', NH2 @ S, NH2 @ 1', SH1 @ S, SH1 @ 1', SH2 @ S and SH2 @ 1'**) were submitted to the laboratory for analysis of BTEX, TPH and/or Chloride. Based on laboratory analytical results, soil was not affected above the NMOCD Closure Criteria beyond 1 Ft. to 4 Ft bgs and the horizontal extent of affected soil impacted above the NMOCD Closure Criteria was adequately defined.

On **December 9, 2019**, remediation activities commenced at the Site. In accordance with the NMOCD, impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standard was excavated and transported to 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 **December 12, 2019**, Etech collected **eighteen (18)** excavation confirmation soil samples (**FL-1 through FL-8, MW-1 through MW-6, SW-1, SW-5, SW-6 and WW**) from the floor and sidewalls of the excavated area. The collected soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples with the exception of soil samples FL-3, FL-4, FL-7, MW-4, SW-1, SW-5 and WW which exhibited chloride concentrations of 1,850 mg/kg, 1,700 mg/kg, 1,120 mg/kg, 958 mg/kg, 4,070 mg/kg, 1,190 mg/kg and 797 mg/kg, respectively. The floor and sidewalls of the excavation was advanced in the areas characterized by soil samples FL-3, FL-4, FL-7, MW-4, SW-1, SW-5 and WW.

On **December 16, 2019**, Etech collected **fourteen (14)** excavation confirmation soil samples (**FL-9 through FL-17 and NW-7 through NW-11**) from the floor and sidewalls of the excavated area. The collected soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples with the exception of soil sample FL-9 which exhibited a chloride concentration of 616 mg/kg. The floor of the excavation was advanced in the area characterized by soil sample FL-9.

On **December 17, 2019**, Etech collected **ten (10)** excavation confirmation soil samples (**FL-18, FL-19, SW-2 through SW-4, SW-7 through SW-10 and EW**) from the floor and sidewalls of the excavated area. The collected soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On **January 3, 2020**, Etech collected **eight (8)** excavation confirmation soil samples (**FL-3B, FL-4B, FL-7B, FL-9B, NW-4B, SW-1B, SW-5B, WW-B**) from the floor and sidewalls of the excavated area. The collected soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations 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 290 Ft. in length, 3 to 25 Ft in width and ranged from 2 to 4 Ft. in depth. During the course of remediation activities approximately **618 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-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the site.

## **6.0 SOIL CLOSURE REQUEST**

Remediation activities were conducted in accordance with applicable NMOCD Regulations. Impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standard was excavated and transported to an NMOCD-approved disposal facility. Laboratory analytical results from excavation confirmation soil samples indicated 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 is submitting this Remediation Summary and Soil Closure Request on behalf of Key Energy Services and requesting closure be granted to the White's City Rd. incident Site.

## **7.0 LIMITATIONS**

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

This report has been prepared for the benefit of Key Energy Services. Use of the information contained in this report is prohibited within the consent of Etech and/or Key Energy Services.



## **8.0 DISTRIBUTION**

***Key Energy Services***

*1301 McKinney St., Suite 1800  
Houston, TX 77010*

***New Mexico Energy, Minerals and Natural Resources Department***

*Oil Conservation Division, District 2  
811 S. First Street  
Artesia, NM 88210*

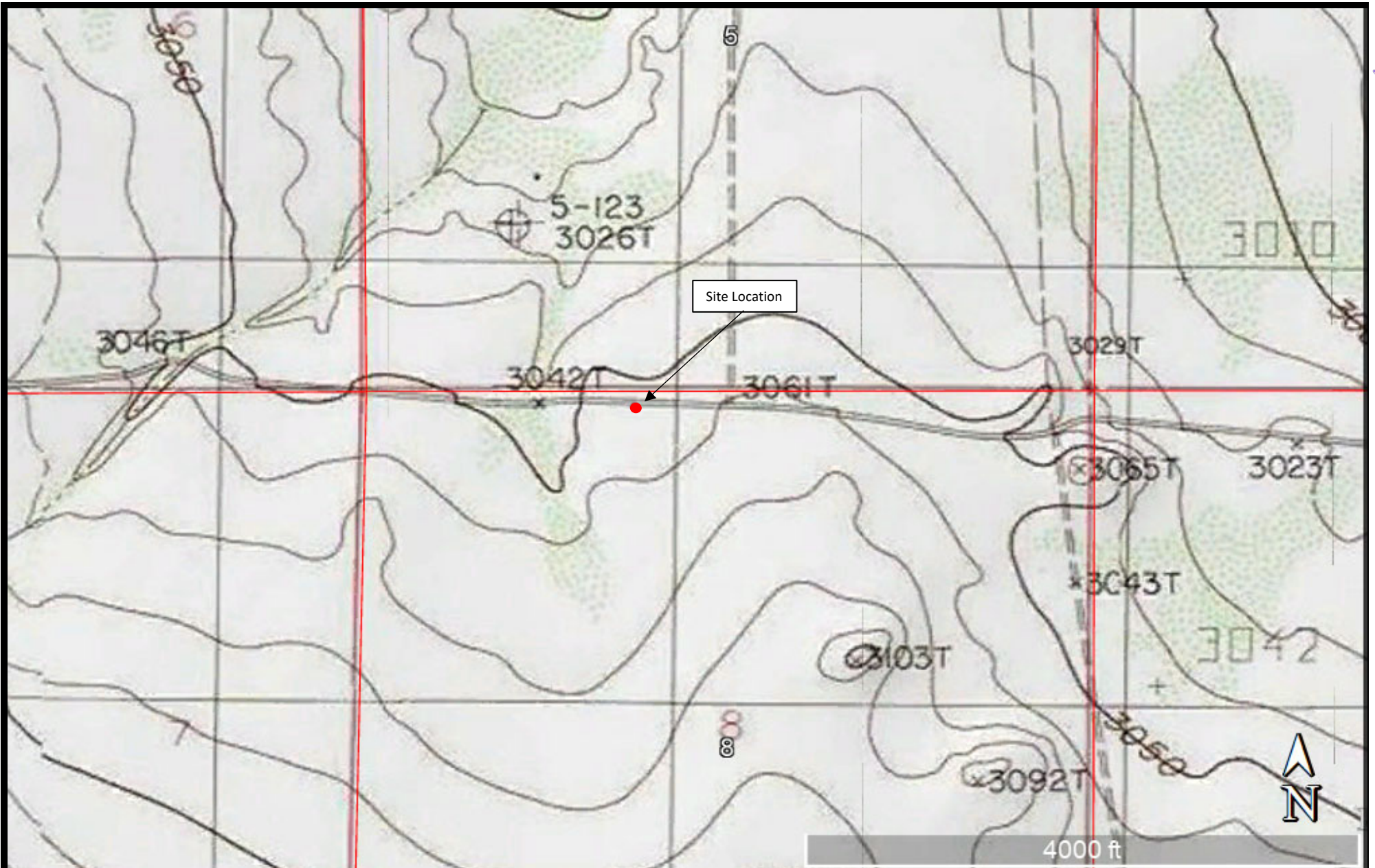
***Hobbs Field Office***

*New Mexico State Land Office  
2827 North Dal Paso Street  
Suite 117  
Hobbs, NM 88240*

*(Electronic Submission)*

## **Figure 1**

### **Topographic Map**



Legend:	
<span style="color: red;">●</span>	Site Location

**Figure 1**  
 Topographic Map  
 Key Energy Services  
 White's City Rd. Incident  
 GPS: 32.06398, -104.11151  
 Eddy County

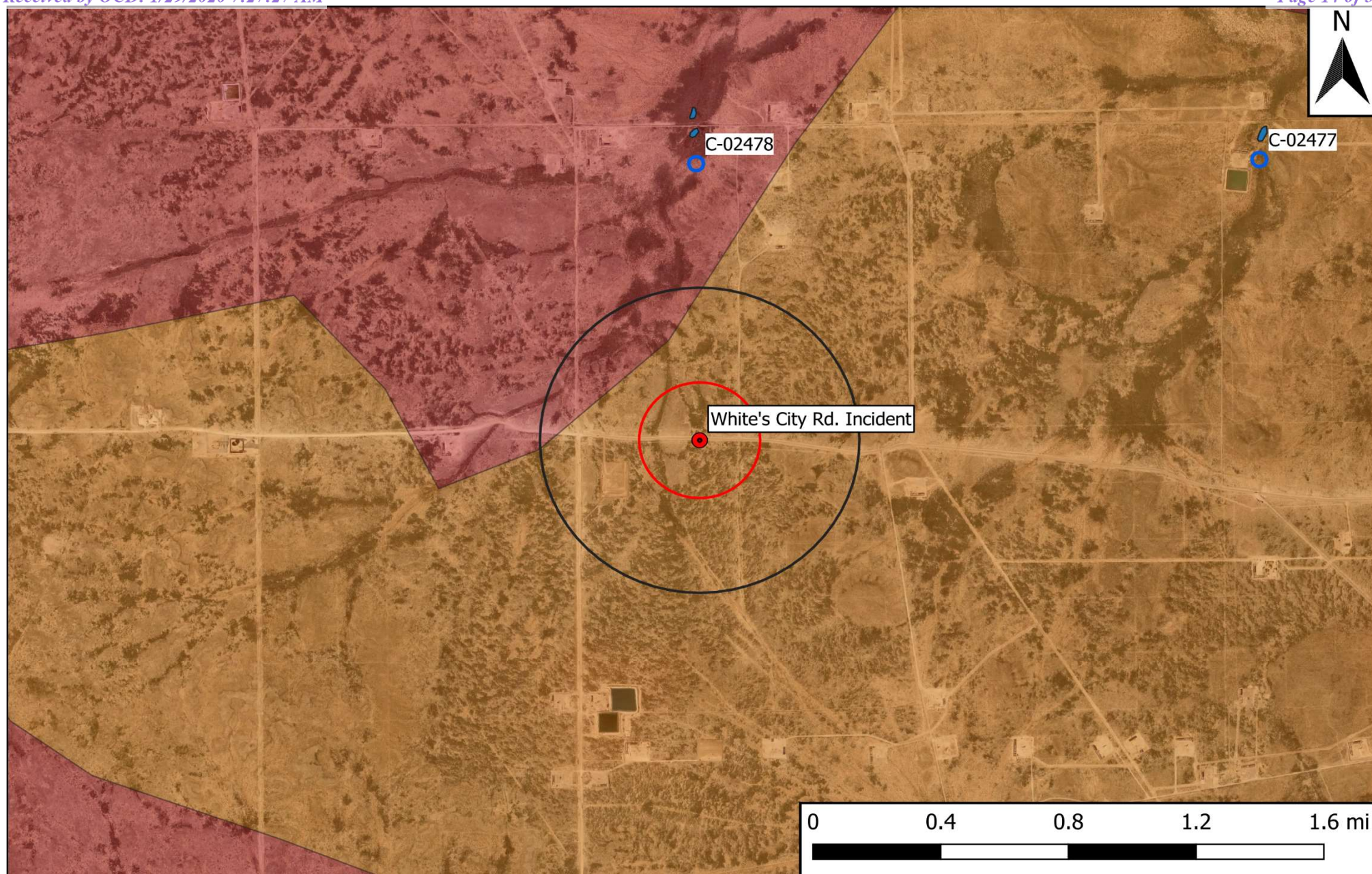
**eTECH**  
 Environmental & Safety Solutions, Inc.

Drafted:	Checked: jwl	Date: 1/22/20
----------	--------------	---------------

## **Figure 2**

### **Aerial Proximity Map**





## Legend

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

**Figure 2**  
 Aerial Map  
 Key Energy Services  
 White's City Rd. Incident  
 GPS: 32.06398, -104.11151  
 Eddy County



Drafted: mag

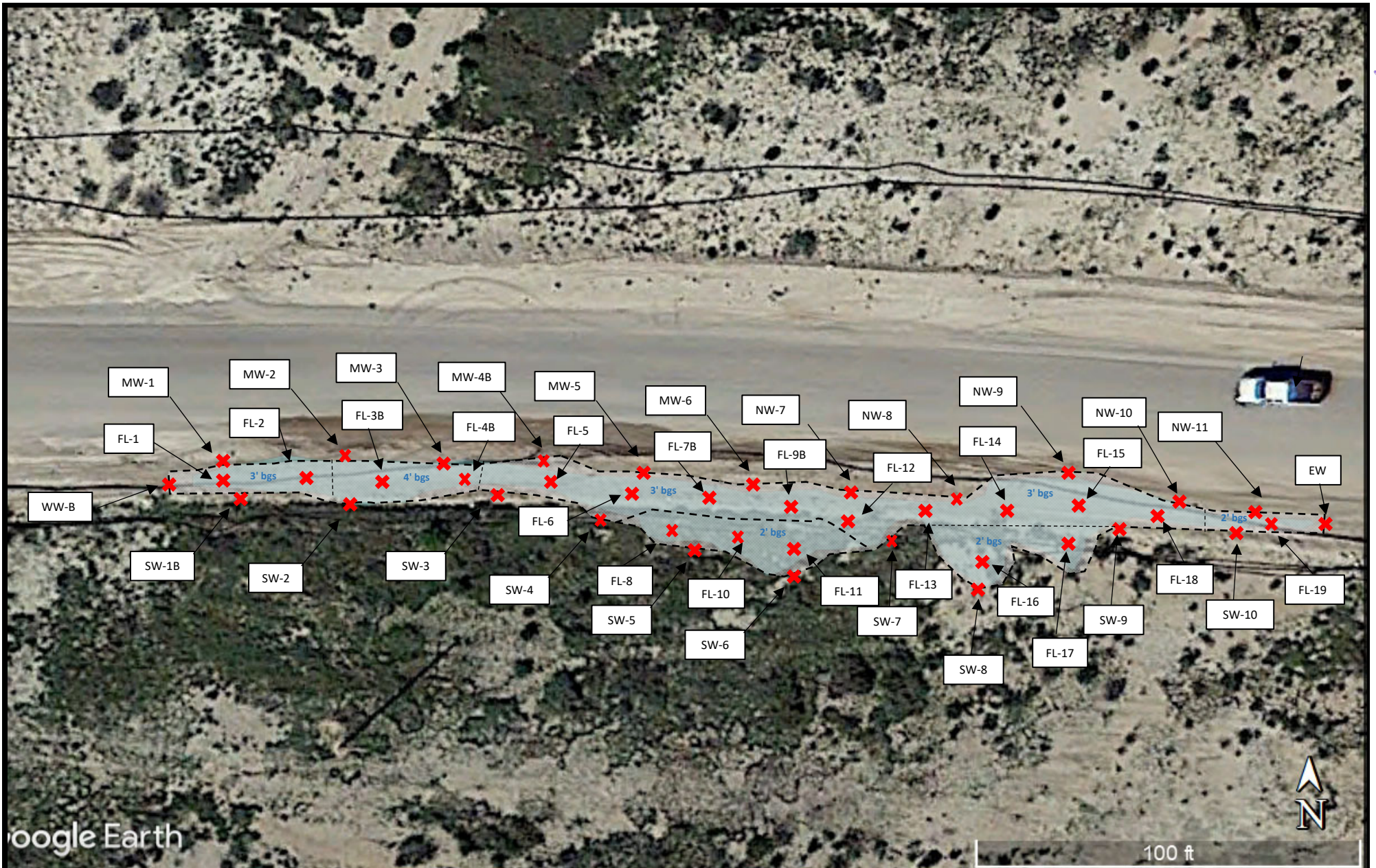
Checked: jwl

Date: 1/23/20



# **Figure 3**

## **Site and Sample Location Map**



**Legend:**

- ✕ Composite Soil Sample Location
- Affected Area

**Figure 3**  
 Site and Sample Location Map  
 Key Energy Services  
 White's City Rd. Incident  
 GPS: 32.06398, -104.11151  
 Eddy County

**eTECH**  
 Environmental & Safety Solutions, Inc.

Drafted:

Checked: jwl

Date: 1/22/20

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

**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL**  
**Key Energy Services**  
**White's City Rd. Incident**  
**NMOCD Ref. No. 2RP-Pending**

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
SP1 @ S	11/20/2019	Surf.	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>13,400</b>
SP1 @ 1'	11/20/2019	1'	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
SP2 @ S	11/20/2019	Surf.	Excavated	<0.050	0.496	19.60	41.30	60.90	<10.0	60.90	<b>20,800</b>
SP2 @ 3'	11/20/2019	3'	In-situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
SP3 @ S	11/20/2019	Surf.	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>18,400</b>
SP3 @ 3'	11/20/2019	3'	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>640</b>
EH1 @ S	11/20/2019	Surf.	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
EH1 @ 1'	11/20/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
WH1 @ S	11/20/2019	Surf.	In-Situ	<0.050	<0.300	<10.0	14.4	14.4	<10.0	14.4	128
WH1 @ 1'	11/20/2019	1'	In-Situ	<0.050	<0.300	<10.0	11.2	11.2	<10.0	11.2	112
NH1 @ S	11/20/2019	Surf.	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
NH1 @ 1'	11/20/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
NH2 @ S	11/20/2019	Surf.	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
NH2 @ 1'	11/20/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SH1 @ S	11/20/2019	Surf.	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SH1 @ 1'	11/20/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SH2 @ S	11/20/2019	Surf.	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SH2 @ 1'	11/20/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FL-1	12/12/2019	3'	In-Situ	ND	ND	ND	1.68 <sup>J</sup>	1.68 <sup>J</sup>	ND	1.68 <sup>J</sup>	273
FL-2	12/12/2019	3'	In-Situ	ND	ND	ND	2.69 <sup>J</sup>	2.69 <sup>J</sup>	ND	2.69 <sup>J</sup>	129
FL-3	12/12/2019	3'	Excavated	ND	ND	ND	2.22 <sup>J</sup>	2.22 <sup>J</sup>	1.13 <sup>J</sup>	3.35 <sup>J</sup>	<b>1,850</b>
FL-3B	1/3/2020	4'	In-Situ	-	-	-	-	-	-	-	13.2
FL-4	12/12/2019	3'	Excavated	ND	ND	ND	1.41 <sup>J</sup>	1.41 <sup>J</sup>	ND	1.41 <sup>J</sup>	<b>1,700</b>
FL-4B	1/3/2020	4'	In-Situ	-	-	-	-	-	-	-	11.1
FL-5	12/12/2019	3'	In-Situ	ND	ND	ND	1.61 <sup>J</sup>	1.61 <sup>J</sup>	ND	1.61 <sup>J</sup>	145
FL-6	12/12/2019	3'	In-Situ	ND	ND	ND	2.28 <sup>J</sup>	2.28 <sup>J</sup>	ND	2.28 <sup>J</sup>	127
FL-7	12/12/2019	2'	Excavated	ND	ND	ND	4.83 <sup>J</sup>	4.83 <sup>J</sup>	1.80 <sup>J</sup>	6.63 <sup>J</sup>	<b>1,120</b>
FL-7B	1/3/2020	3'	In-Situ	-	-	-	-	-	-	-	16.2
FL-8	12/12/2019	2'	In-Situ	ND	ND	ND	3.62 <sup>J</sup>	3.62 <sup>J</sup>	ND	3.62 <sup>J</sup>	47.6
FL-9	12/16/2019	2'	Excavated	ND	ND	ND	0.865 <sup>J</sup>	0.865 <sup>J</sup>	ND	0.865 <sup>J</sup>	<b>616</b>
FL-9B	1/3/2020	3'	In-Situ	-	-	-	-	-	-	-	34.2
FL-10	12/16/2019	2'	In-Situ	ND	ND	4.34 <sup>J</sup>	1.66 <sup>J</sup>	6.00 <sup>J</sup>	ND	6.00 <sup>J</sup>	165
FL-11	12/16/2019	2'	In-Situ	ND	ND	ND	1.44 <sup>J</sup>	1.44 <sup>J</sup>	ND	1.44 <sup>J</sup>	192
FL-12	12/16/2019	3'	In-Situ	ND	ND	ND	2.49 <sup>J</sup>	2.49 <sup>J</sup>	ND	2.49 <sup>J</sup>	27.7
FL-13	12/16/2019	3'	In-Situ	ND	ND	ND	2.09 <sup>J</sup>	2.09 <sup>J</sup>	ND	2.09 <sup>J</sup>	26.8
FL-14	12/16/2019	3'	In-Situ	ND	ND	ND	1.50 <sup>J</sup>	1.50 <sup>J</sup>	ND	1.50 <sup>J</sup>	29.2
FL-15	12/16/2019	3'	In-Situ	ND	ND	ND	2.21 <sup>J</sup>	2.21 <sup>J</sup>	1.11 <sup>J</sup>	3.32 <sup>J</sup>	170
FL-16	12/16/2019	2'	In-Situ	ND	ND	ND	0.979 <sup>J</sup>	0.979 <sup>J</sup>	ND	0.979 <sup>J</sup>	299
FL-17	12/16/2019	2'	In-Situ	ND	ND	ND	1.18 <sup>J</sup>	1.18 <sup>J</sup>	ND	1.18 <sup>J</sup>	374
FL-18	12/17/2019	8'	In-Situ	ND	ND	ND	1.21 <sup>J</sup>	1.21 <sup>J</sup>	ND	1.21 <sup>J</sup>	298
FL-19	12/17/2019	2'	In-Situ	ND	ND	ND	1.40 <sup>J</sup>	1.40 <sup>J</sup>	ND	1.40 <sup>J</sup>	156
<b>Closure Criteria</b>				<b>10</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100</b>	<b>600</b>

**NOTES:**

- = Not analyzed for that constituent.

**Bold** text denotes a concentration that exceeds the NMOCD Closure Criteria

J = estimated value



**TABLE 1**  
**CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL**  
**Key Energy Services**  
**White's City Rd. Incident**  
**NMOCD Ref. No. 2RP-Pending**

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)
MW-1	12/12/2019	NA	In-Situ	ND	ND	ND	2.55 <sup>J</sup>	2.55 <sup>J</sup>	1.51 <sup>J</sup>	4.06 <sup>J</sup>	281
MW-2	12/12/2019	NA	In-Situ	ND	ND	ND	2.20 <sup>J</sup>	2.20 <sup>J</sup>	ND	2.20 <sup>J</sup>	169
MW-3	12/12/2019	NA	In-Situ	ND	ND	ND	8.99 <sup>J</sup>	8.99 <sup>J</sup>	2.74 <sup>J</sup>	11.73 <sup>J</sup>	424
MW-4	12/12/2019	NA	Excavated	ND	ND	ND	3.33 <sup>J</sup>	3.33 <sup>J</sup>	2.05 <sup>J</sup>	5.38 <sup>J</sup>	<b>958</b>
NW-4B	1/3/2020	NA	In-Situ	-	-	-	-	-	-	-	11.9
MW-5	12/12/2019	NA	In-Situ	ND	ND	ND	1.82 <sup>J</sup>	1.82 <sup>J</sup>	ND	1.82 <sup>J</sup>	22.3
MW-6	12/12/2019	NA	In-Situ	ND	ND	ND	2.02 <sup>J</sup>	2.02 <sup>J</sup>	ND	2.02 <sup>J</sup>	96.1
NW-7	12/16/2019	NA	In-Situ	ND	ND	7.87 <sup>J</sup>	2.16 <sup>J</sup>	10.03 <sup>J</sup>	1.33 <sup>J</sup>	11.36 <sup>J</sup>	502
NW-8	12/16/2019	NA	In-Situ	ND	ND	5.47 <sup>J</sup>	2.48 <sup>J</sup>	7.95 <sup>J</sup>	ND	7.95 <sup>J</sup>	38.9
NW-9	12/16/2019	NA	In-Situ	ND	ND	ND	2.60 <sup>J</sup>	2.60 <sup>J</sup>	2.31 <sup>J</sup>	4.91 <sup>J</sup>	50.1
NW-10	12/16/2019	NA	In-Situ	ND	ND	ND	2.16 <sup>J</sup>	2.16 <sup>J</sup>	1.70 <sup>J</sup>	3.86 <sup>J</sup>	55.6
NW-11	12/16/2019	NA	In-Situ	ND	ND	3.33 <sup>J</sup>	1.56 <sup>J</sup>	4.89 <sup>J</sup>	1.46 <sup>J</sup>	6.35 <sup>J</sup>	101
SW-1	12/12/2019	NA	Excavated	ND	ND	ND	3.27 <sup>J</sup>	3.27 <sup>J</sup>	2.13 <sup>J</sup>	5.40 <sup>J</sup>	<b>4,070</b>
SW-1B	1/3/2020	NA	In-Situ	-	-	-	-	-	-	-	12.1
SW-2	12/17/2019	NA	In-Situ	ND	ND	ND	1.16 <sup>J</sup>	1.16 <sup>J</sup>	ND	1.16 <sup>J</sup>	18.8
SW-3	12/17/2019	NA	In-Situ	ND	ND	ND	2.61 <sup>J</sup>	2.61 <sup>J</sup>	9.92 <sup>J</sup>	12.53 <sup>J</sup>	13.6
SW-4	12/17/2019	NA	In-Situ	ND	ND	ND	1.08 <sup>J</sup>	1.08 <sup>J</sup>	ND	1.08 <sup>J</sup>	23.1
SW-5	12/12/2019	NA	Excavated	ND	ND	ND	1.19 <sup>J</sup>	1.19 <sup>J</sup>	ND	1.19 <sup>J</sup>	<b>1,190</b>
SW-5B	1/3/2020	NA	In-Situ	-	-	-	-	-	-	-	12.0
SW-6	12/12/2019	NA	In-Situ	ND	ND	ND	3.84 <sup>J</sup>	3.84 <sup>J</sup>	ND	3.84 <sup>J</sup>	297
SW-7	12/17/2019	NA	In-Situ	ND	ND	ND	1.78 <sup>J</sup>	1.78 <sup>J</sup>	ND	1.78 <sup>J</sup>	47.3
SW-8	12/17/2019	NA	In-Situ	ND	ND	ND	1.22 <sup>J</sup>	1.22 <sup>J</sup>	ND	1.22 <sup>J</sup>	564
SW-9	12/17/2019	NA	In-Situ	ND	ND	ND	1.66 <sup>J</sup>	1.66 <sup>J</sup>	ND	1.66 <sup>J</sup>	18.6
SW-10	12/17/2019	NA	In-Situ	ND	ND	6.10 <sup>J</sup>	1.11 <sup>J</sup>	7.21 <sup>J</sup>	ND	7.21 <sup>J</sup>	14.7
WW	12/12/2019	NA	Excavated	ND	ND	ND	4.85 <sup>J</sup>	4.85 <sup>J</sup>	1.99 <sup>J</sup>	6.84 <sup>J</sup>	<b>797</b>
WW-B	1/3/2020	NA	In-Situ	-	-	-	-	-	-	-	17.9
EW	12/17/2019	NA	In-Situ	ND	ND	ND	3.58 <sup>J</sup>	3.58 <sup>J</sup>	ND	3.58 <sup>J</sup>	38.8
<b>Closure Criteria</b>				<b>10</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100</b>	<b>600</b>

**NOTES:**

- = Not analyzed for that constituent.

**Bold** text denotes a concentration that exceeds the NMOCD Closure Criteria

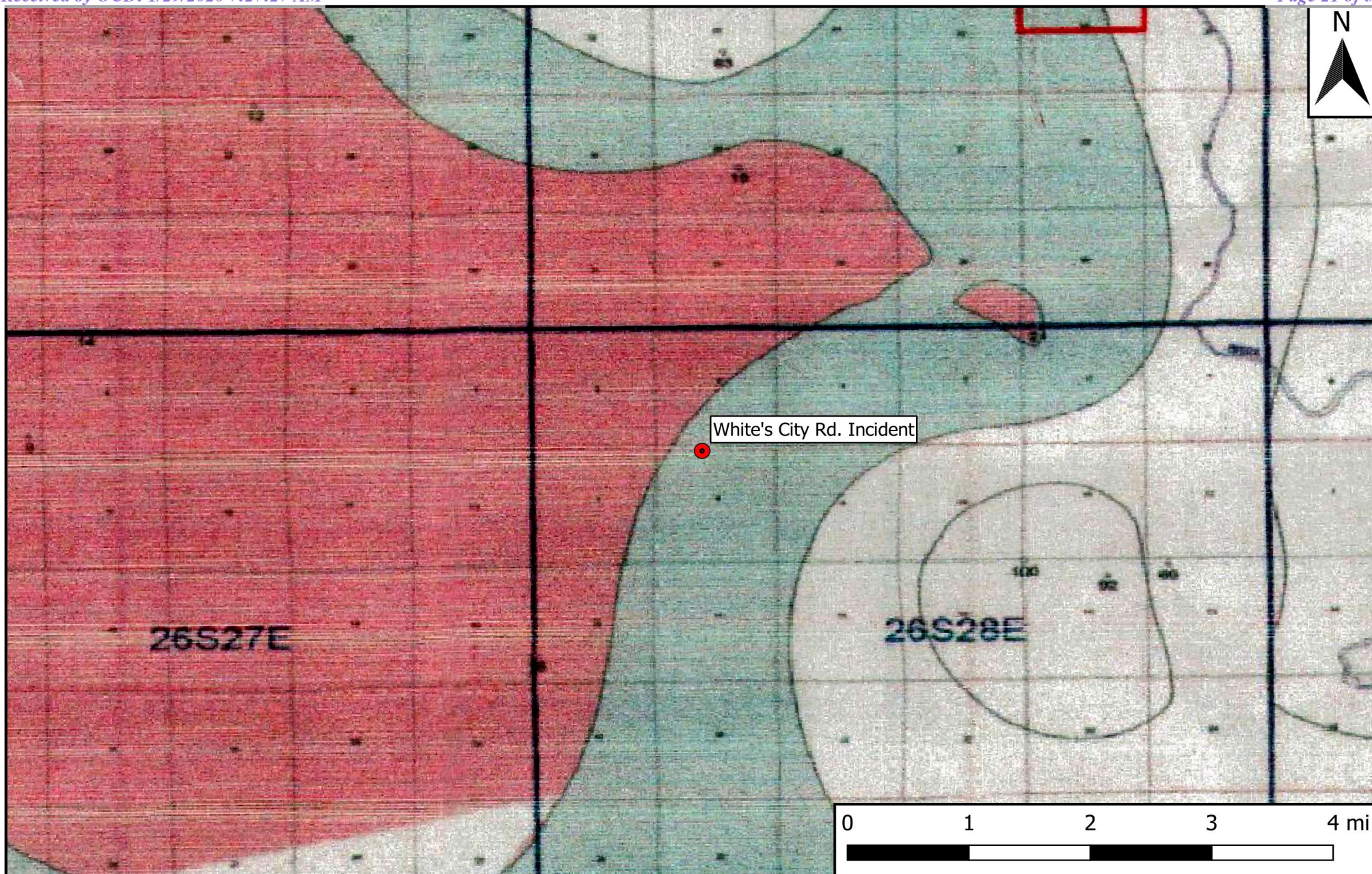
J = estimated value



## **Appendix A**

### **Depth to Groundwater Information**





## Legend

- Site Location

## Figure 4

Inferred Depth to Groundwater Trend Map  
Key Energy Services  
White's City Rd. Incident  
GPS: 32.06398, -104.11151  
Eddy County



Drafted: mag

Checked: jwl

Date: 1/23/20





## New Mexico Office of the State Engineer

# Water Column/Average Depth to Water

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

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

No records found.

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 583865.78

**Northing (Y):** 3547872.65

**Radius:** 804.67

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.

1/23/20 9:51 AM

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



# 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	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">C 02478</a>		CUB	ED	2	1	05	26S	28E		583848	3549325*	1452	100		
<a href="#">C 02477</a>		CUB	ED	1	1	03	26S	28E		586687	3549347*	3183	150		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

**Record Count:** 2

### UTM NAD83 Radius Search (in meters):

**Easting (X):** 583865.78

**Northing (Y):** 3547872.65

**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.

1/23/20 9:53 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
C	02477	1	1	03	26S	28E	586687	3549347*	

x

**Driller License:****Driller Company:****Driller Name:** HEPLER BROS**Drill Start Date:****Drill Finish Date:** 12/31/1912**Plug Date:****Log File Date:****PCW Rcv Date:****Source:****Pump Type:****Pipe Discharge Size:****Estimated Yield:** 6 GPM**Casing Size:** 6.00**Depth Well:** 150 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.

1/23/20 9:53 AM

POINT OF DIVERSION SUMMARY






# New Mexico Office of the State Engineer

## Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
C	02478	2	1	05	26S	28E	583848	3549325*	

x

**Driller License:****Driller Company:****Driller Name:** HEPLER BROS**Drill Start Date:****Drill Finish Date:** 12/31/1916**Plug Date:****Log File Date:****PCW Rcv Date:****Source:****Pump Type:****Pipe Discharge Size:****Estimated Yield:** 5 GPM**Casing Size:** 6.00**Depth Well:** 100 feet**Depth Water:**

x

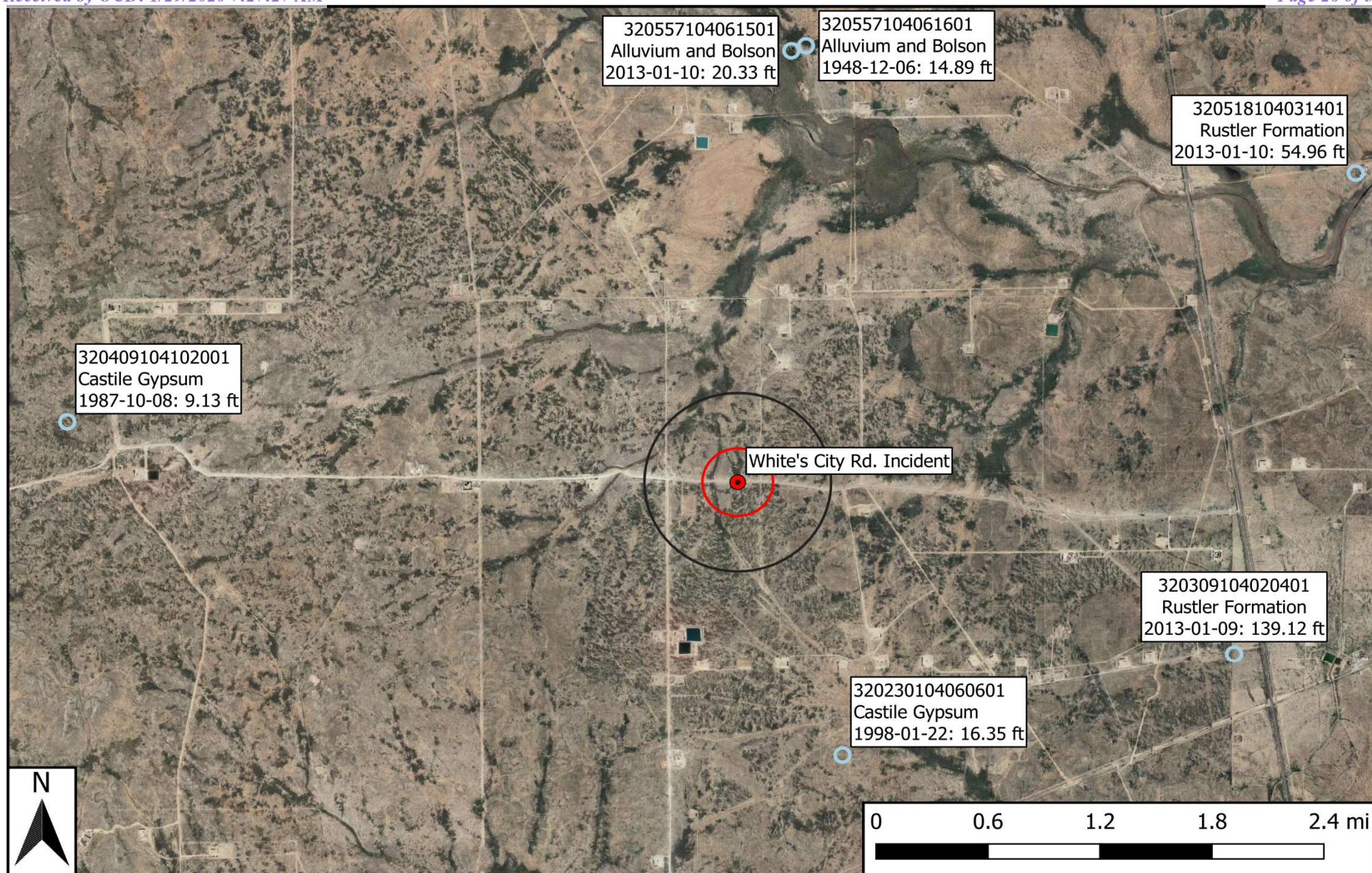
\*UTM location was derived from PLSS - see Help

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.

1/23/20 9:52 AM

POINT OF DIVERSION SUMMARY





## Legend

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

## Figure 5

USGS Well Proximity Map  
Key Energy Services  
White's City Rd. Incident  
GPS: 32.06398, -104.11151  
Eddy County



Drafted: mag

Checked: jwl

Date: 1/23/20





USGS Home  
Contact USGS  
Search USGS

# National Water Information System: Web Interface


USGS Water Resources

Data Category:  
Groundwater

Geographic Area:  
United States

GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

## Search Results -- 1 sites found

Agency code = usgs  
site\_no list =

- 320230104060601

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

## USGS 320230104060601 26S.28E.18.33111

Available data for this site 

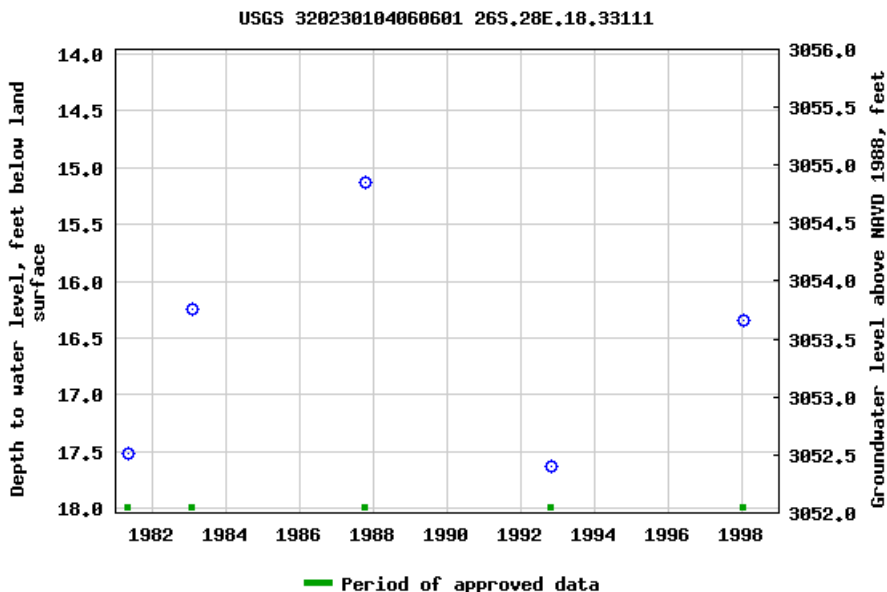
Groundwater: Field measurements

GO

Eddy County, New Mexico  
Hydrologic Unit Code 13070002  
Latitude 32°02'30", Longitude 104°06'06" NAD27  
Land-surface elevation 3,070 feet above NAVD88  
This well is completed in the Castile Gypsum (312CSTL) local aquifer.

### Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>



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

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[Plug-Ins](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: Groundwater for USA: Water Levels**

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



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

Page Last Modified: 2020-01-23 11:36:53 EST

0.5 0.42 nadww02



National Water Information System: Web Interface


USGS Water Resources

Data Category:  
Groundwater

Geographic Area:  
United States

GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs  
site\_no list =

- 320309104020401

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

USGS 320309104020401 26S.28E.14.11111

Available data for this site 

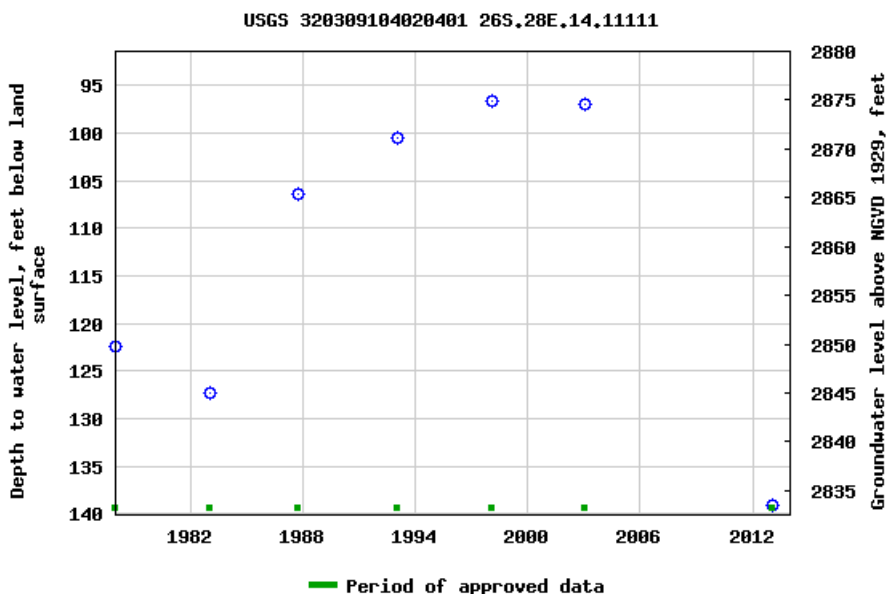
Groundwater: Field measurements

GO

Eddy County, New Mexico  
Hydrologic Unit Code 13060011  
Latitude 32°02'59.0", Longitude 104°03'58.7" NAD83  
Land-surface elevation 2,972.00 feet above NGVD29  
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>



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

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[Plug-Ins](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: Groundwater for USA: Water Levels**

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



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

Page Last Modified: 2020-01-23 11:43:51 EST

0.67 0.47 nadww01





National Water Information System: Web Interface


USGS Water Resources

Data Category:  
Groundwater

Geographic Area:  
United States

GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs  
site\_no list =

- 320409104102001

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

USGS 320409104102001 26S.27E.05.44233

Available data for this site 

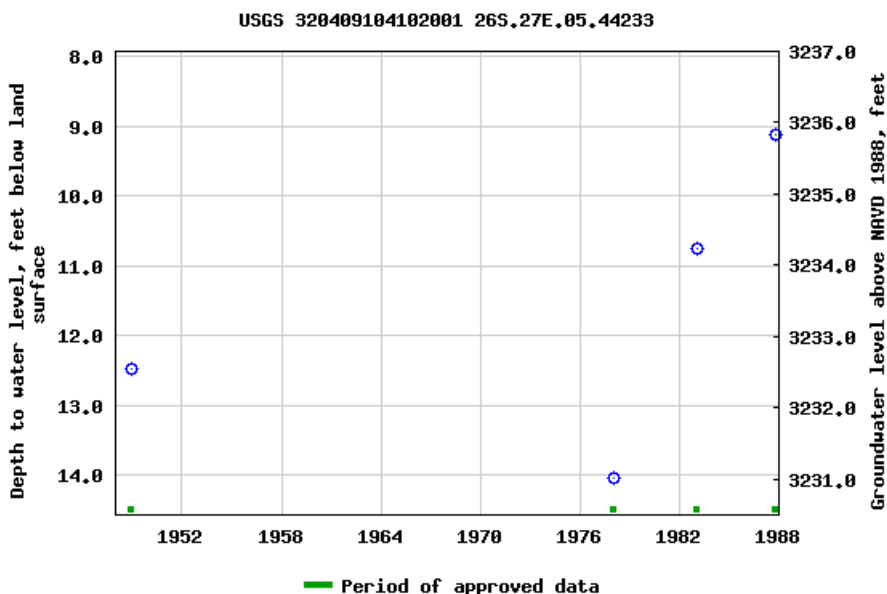
Groundwater: Field measurements

GO

Eddy County, New Mexico  
Hydrologic Unit Code 13060011  
Latitude 32°04'09", Longitude 104°10'20" NAD27  
Land-surface elevation 3,245 feet above NAVD88  
This well is completed in the Castile Gypsum (312CSTL) local aquifer.

Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>



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

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[Plug-Ins](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: Groundwater for USA: Water Levels**

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



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

Page Last Modified: 2020-01-23 11:49:00 EST

0.52 0.45 nadww01



National Water Information System: Web Interface


USGS Water Resources

Data Category:  
Groundwater

Geographic Area:  
United States

GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs  
site\_no list =

- 320518104031401

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

USGS 320518104031401 25S.28E.35.2324

Available data for this site 

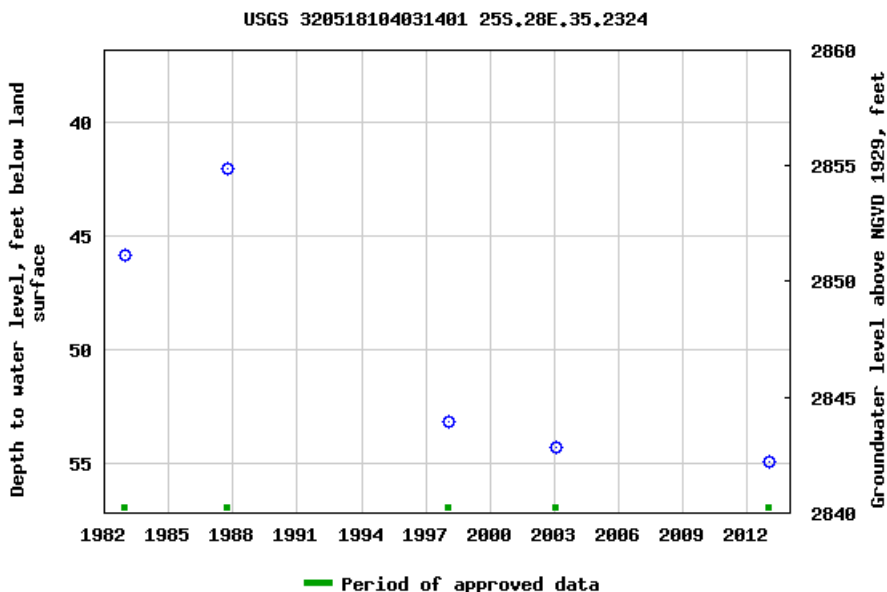
Groundwater: Field measurements

GO

Eddy County, New Mexico  
Hydrologic Unit Code 13060011  
Latitude 32°05'19.0", Longitude 104°03'17.3" NAD83  
Land-surface elevation 2,897 feet above NGVD29  
The depth of the well is 180 feet below land surface.  
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>



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

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[Plug-Ins](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: Groundwater for USA: Water Levels**

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



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

Page Last Modified: 2020-01-23 11:49:00 EST

0.6 0.44 nadww01





## National Water Information System: Web Interface

USGS Water Resources

Data Category:


Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

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

Groundwater levels for the Nation

## Search Results -- 1 sites found

Agency code = usgs

site\_no list =

- 320557104061501

Minimum number of levels = 1

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

## USGS 320557104061501 25S.28E.29.41243A

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°05'56.0", Longitude 104°06'22.6" NAD83

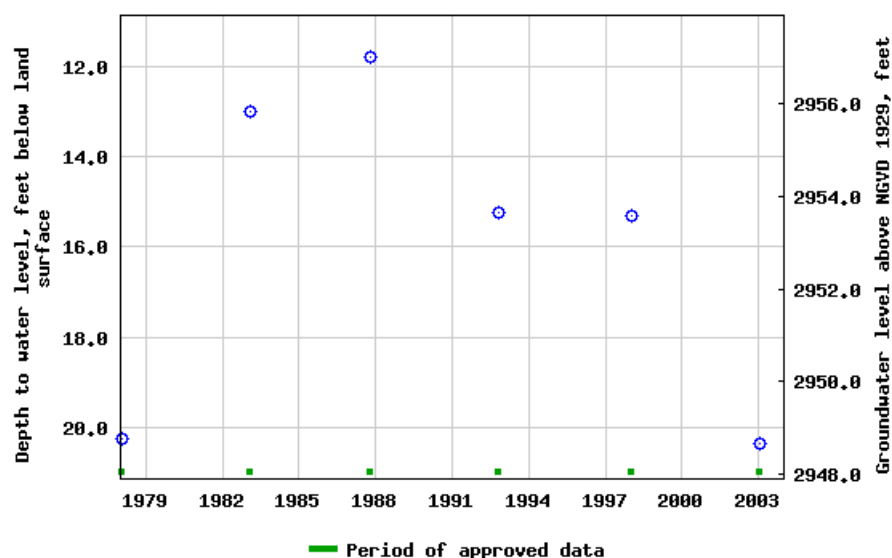
Land-surface elevation 2,968.90 feet above NGVD29

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

## Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

USGS 320557104061501 25S.28E.29.41243A



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

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[Plug-Ins](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: Groundwater for USA: Water Levels**

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



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

Page Last Modified: 2020-01-23 11:49:01 EST

0.56 0.45 nadww01



National Water Information System: Web Interface


USGS Water Resources

Data Category:  
Groundwater

Geographic Area:  
United States

GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs  
site\_no list =

- 320557104061601

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

USGS 320557104061601 25S.28E.29.41243

Available data for this site 

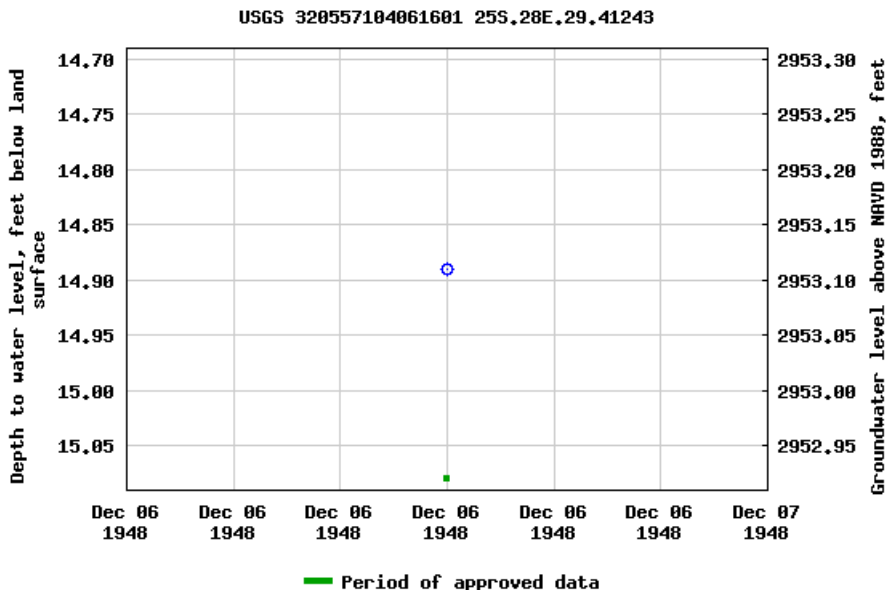
Groundwater: Field measurements

GO

Eddy County, New Mexico  
Hydrologic Unit Code 13060011  
Latitude 32°05'57", Longitude 104°06'16" NAD27  
Land-surface elevation 2,968 feet above NAVD88  
The depth of the well is 60 feet below land surface.  
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

<a href="#">Table of data</a>
<a href="#">Tab-separated data</a>
<a href="#">Graph of data</a>
<a href="#">Reselect period</a>



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

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[Plug-Ins](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

**Title: Groundwater for USA: Water Levels**

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



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

Page Last Modified: 2020-01-23 11:50:05 EST

0.53 0.48 nadww01



## **Appendix B**

### **Field Data and Soil Profile Logs**

## Initial Release Assessment Form

Project: White's City Rd. Incident

Project Number: 11543

Clean Up Level:

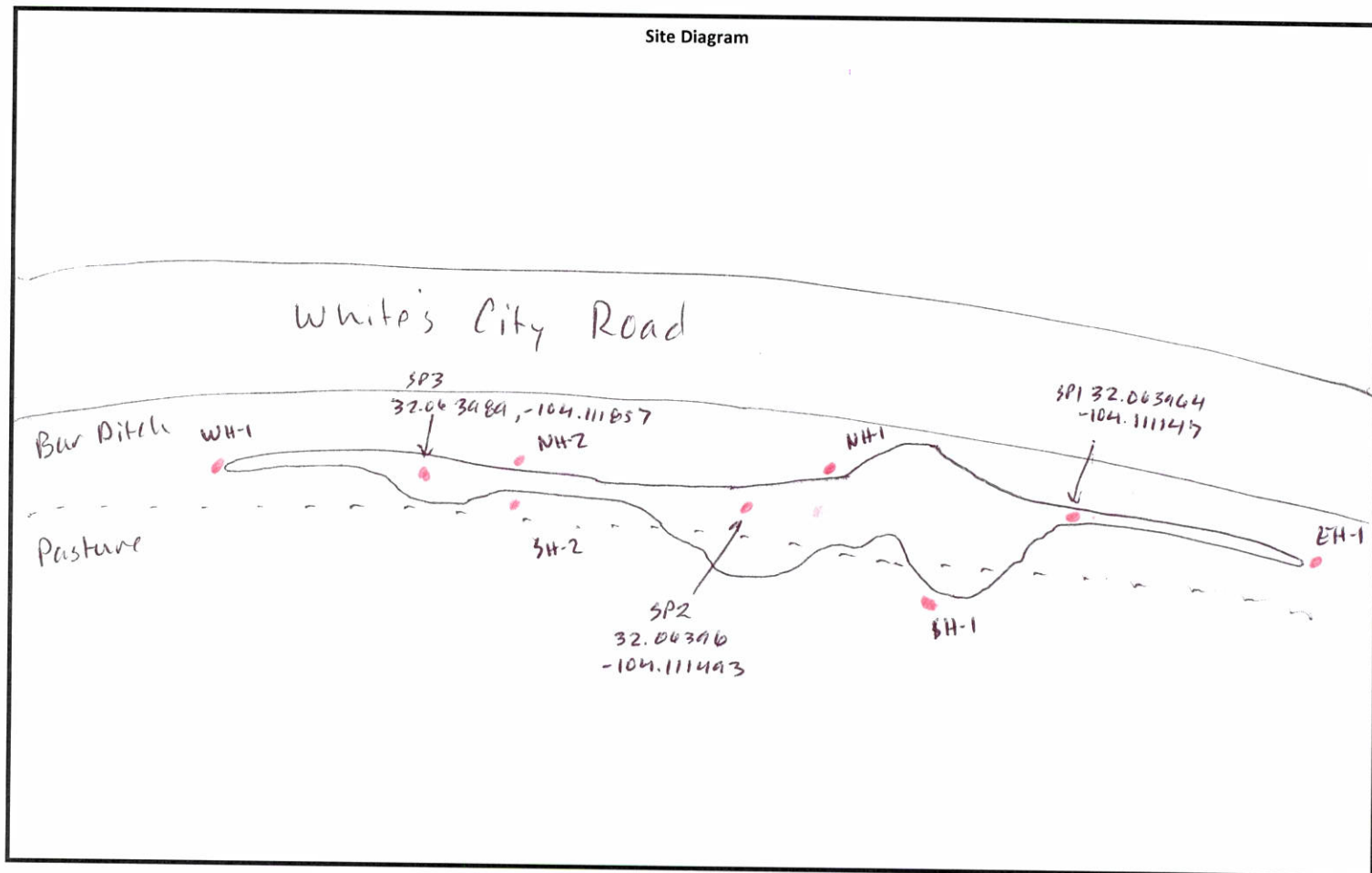
Latitude: 32.06398

Date: 11/70/11

600 mg/kg Cl-, 100 mg/kg TPH

Longitude: -104.11151

Site Diagram



**Notes:**

Conduct initial release assessment  
Map site  
Get Vertical: Horizontal Delineation w/ Auger

~Length: 290' ~Width: 2-25' ~Area: ~3200

~Depth: 1-3 Ft

3-4 Representative Pictures of the Affected Area including sample locations?

Yes No

☒ ☐

Necessary Samples Field Screened and on Ice?

☒ ☐

Sample and Field Screen Data Entered on Sample Log?

☒ ☐

Was horizontal and vertical delineation achieved?

☒ ☐

## Sample Log

Project: Empty Project White's City Rd

Date: 11-20-19

Project Number: 011543

Latitude:  $32.06398^\circ$

Longitude: -104.11151

[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

Project: White's City Rd Date: 1/7/2020  
 Empty Project  
 Project Number: 011543 Latitude: 32.06348 Longitude: -104.11151  
 0 0

Depth (ft. bgs)	Description
1	Light Brown Top Soil
2	
3	Salt white Caliche
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	



## **Appendix C**

### **Laboratory Analytical Reports**



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

---

November 26, 2019

JOEL LOWRY

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: WHITE'S CITY RD. INCIDENT

Enclosed are the results of analyses for samples received by the laboratory on 11/21/19 16:15.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SP 1 @ SURFACE (H903961-01)**

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/23/2019	ND	1.71	85.4	2.00	1.98		
Toluene*	<0.050	0.050	11/23/2019	ND	1.66	83.2	2.00	1.78		
Ethylbenzene*	<0.050	0.050	11/23/2019	ND	1.70	84.8	2.00	2.11		
Total Xylenes*	<0.150	0.150	11/23/2019	ND	5.11	85.1	6.00	2.45		
Total BTEX	<0.300	0.300	11/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	13400	16.0	11/25/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	212	106	200	0.750	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	203	101	200	3.28	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 93.3 % 41-142

Surrogate: 1-Chlorooctadecane 97.6 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SP 1 @ 1' (H903961-02)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.67	83.4	2.00	2.52		
Toluene*	<0.050	0.050	11/22/2019	ND	1.66	82.9	2.00	4.81		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	84.0	2.00	5.19		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	5.20	86.7	6.00	8.07		
Total BTEX	<0.300	0.300	11/22/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	11/25/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	212	106	200	0.750	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	203	101	200	3.28	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 97.9 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SP 2 @ SURFACE (H903961-03)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2019	ND	1.67	83.4	2.00	2.52	
Toluene*	0.080	0.050	11/22/2019	ND	1.66	82.9	2.00	4.81	
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	84.0	2.00	5.19	
Total Xylenes*	0.415	0.150	11/22/2019	ND	5.20	86.7	6.00	8.07	
Total BTX	0.496	0.300	11/22/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	20800	16.0	11/25/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	19.6	10.0	11/22/2019	ND	212	106	200	0.750	
DRO >C10-C28*	41.3	10.0	11/22/2019	ND	203	101	200	3.28	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 96.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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





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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SP 2 @ 3' (H903961-04)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2019	ND	1.67	83.4	2.00	2.52	
Toluene*	<0.050	0.050	11/22/2019	ND	1.66	82.9	2.00	4.81	
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	84.0	2.00	5.19	
Total Xylenes*	<0.150	0.150	11/22/2019	ND	5.20	86.7	6.00	8.07	
Total BTX	<0.300	0.300	11/22/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	11/25/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	212	106	200	0.750	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	203	101	200	3.28	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 98.1 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SP 3 @ SURFACE (H903961-05)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2019	ND	1.67	83.4	2.00	2.52	
Toluene*	<0.050	0.050	11/22/2019	ND	1.66	82.9	2.00	4.81	
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	84.0	2.00	5.19	
Total Xylenes*	<0.150	0.150	11/22/2019	ND	5.20	86.7	6.00	8.07	
Total BTX	<0.300	0.300	11/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	18400	16.0	11/25/2019	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	212	106	200	0.750	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	203	101	200	3.28	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 92.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.8 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SP 3 @ 3' (H903961-06)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14	
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48	
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89	
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59	
Total BTEX	<0.300	0.300	11/22/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	11/25/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	212	106	200	0.750	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	203	101	200	3.28	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: EH 1 @ SURFACE (H903961-07)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTX	<0.300	0.300	11/22/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	212	106	200	0.750	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	203	101	200	3.28	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 81.0 % 41-142

Surrogate: 1-Chlorooctadecane 83.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: EH 1 @ 1' (H903961-08)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTEX	<0.300	0.300	11/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	212	106	200	0.750	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	203	101	200	3.28	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 91.3 % 41-142

Surrogate: 1-Chlorooctadecane 94.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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





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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: WH 1 @ SURFACE (H903961-09)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTEX	<0.300	0.300	11/22/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	14.4	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 75.8 % 41-142

Surrogate: 1-Chlorooctadecane 76.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: WH 1 @ 1' (H903961-10)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14	
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48	
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89	
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59	
Total BTX	<0.300	0.300	11/22/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	11/25/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	11.2	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 76.3 % 41-142

Surrogate: 1-Chlorooctadecane 79.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: NH 1 @ SURFACE (H903961-11)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTX	<0.300	0.300	11/22/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 71.4 % 41-142

Surrogate: 1-Chlorooctadecane 72.6 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: NH 1 @ 1' (H903961-12)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTEX	<0.300	0.300	11/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 81.4 % 41-142

Surrogate: 1-Chlorooctadecane 83.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: NH 2 @ SURFACE (H903961-13)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTX	<0.300	0.300	11/22/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 80.0 % 41-142

Surrogate: 1-Chlorooctadecane 81.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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





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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: NH 2 @ 1' (H903961-14)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTEX	<0.300	0.300	11/22/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 80.0 % 41-142

Surrogate: 1-Chlorooctadecane 80.6 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SH 1 @ SURFACE (H903961-15)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14	
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48	
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89	
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59	
Total BTX	<0.300	0.300	11/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 82.8 % 41-142

Surrogate: 1-Chlorooctadecane 84.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SH 1 @ 1' (H903961-16)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTEX	<0.300	0.300	11/22/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 74.0 % 41-142

Surrogate: 1-Chlorooctadecane 75.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SH 2 @ SURFACE (H903961-17)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTX	<0.300	0.300	11/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	11/25/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 58.7 % 41-142

Surrogate: 1-Chlorooctadecane 58.0 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



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

**Analytical Results For:**

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

Received:	11/21/2019	Sampling Date:	11/20/2019
Reported:	11/26/2019	Sampling Type:	Soil
Project Name:	WHITE'S CITY RD. INCIDENT	Sampling Condition:	Cool & Intact
Project Number:	11543	Sample Received By:	Jodi Henson
Project Location:	EDDY CO NM		

**Sample ID: SH 2 @ 1' (H903961-18)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/22/2019	ND	1.73	86.6	2.00	6.14		
Toluene*	<0.050	0.050	11/22/2019	ND	1.70	85.2	2.00	7.48		
Ethylbenzene*	<0.050	0.050	11/22/2019	ND	1.68	83.8	2.00	5.89		
Total Xylenes*	<0.150	0.150	11/22/2019	ND	4.92	82.1	6.00	5.59		
Total BTX	<0.300	0.300	11/22/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/25/2019	ND	416	104	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/22/2019	ND	216	108	200	0.352	
DRO >C10-C28*	<10.0	10.0	11/22/2019	ND	208	104	200	0.732	
EXT DRO >C28-C36	<10.0	10.0	11/22/2019	ND					

Surrogate: 1-Chlorooctane 75.6 % 41-142

Surrogate: 1-Chlorooctadecane 77.1 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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



---

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

---

### Notes and Definitions

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

---

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

A handwritten signature in black ink, appearing to read "Mike Snyder".

---

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





# **CARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

## **CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

Company Name: Key Energy				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																	
Project Manager: Joel Lowry				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																	
Address:				Company: Etech																					
City:		State:		Zip:		Attn:																			
Phone #:		Fax #:		Address:																					
Project #: 11543		Project Owner:		City:																					
Project Name: White's City Rd. Incident				State:																Zip:					
Project Location: Rural Eddy County				Phone #:																					
Sampler Name: Catalina Baeza				Fax #:																					
FOR LAB USE ONLY																									
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV.	SAMPLING																
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME											
H903961																									
1	SP1 @ S	G	1			✓				✓			11/20/19	09:30	✓	✓	✓								
2	SP1 @ 1'	G	1			✓				✓			11/20/19	09:40	✓	✓	✓								
3	SP2 @ S	G	1			✓				✓			11/20/19	09:55	✓	✓	✓								
4	SP2 @ 3'	G	1			✓				✓			11/20/19	10:00	✓	✓	✓								
5	SP3 @ S	G	1			✓				✓			11/20/19	10:05	✓	✓	✓								
6	SP3 @ 3'	G	1			✓				✓			11/20/19	10:15	✓	✓	✓								
7	EH1 @ S	G	1			✓				✓			11/20/19	10:20	✓	✓	✓								
8	EH1 @ 1'	G	1			✓				✓			11/20/19	10:25	✓	✓	✓								
9	WH1 @ S	G	1			✓				✓			11/20/19	10:35	✓	✓	✓								
10	WH1 @ 1'	G	1			✓				✓			11/20/19	10:40	✓	✓	✓								

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

Relinquished By:	Date: 11/21/19	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
	Time: 16:15		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:		email results pm@etechenv.com	
Delivered By: (Circle One)		Sample Condition	CHECKED BY:	
Sampler - UPS - Bus - Other:		Cool Intact	(Initials)	
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
		<input type="checkbox"/> No <input type="checkbox"/> No		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

**ARDINAL LABORATORIES**

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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

Relinquished By:		Date:	Received By:	Phone Result:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Add'l Phone #:
Time:		11/21/19	16:15	Fax Result:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS:			
Time:				email results			
Delivered By: (Circle One)		Sample Condition		CHECKED BY:			
Sampler - UPS - Bus - Other:		Cool Intact		(Initials)			
-2.6i / -2.7i #97		<input type="checkbox"/> Yes <input type="checkbox"/> No					
		<input type="checkbox"/> No <input type="checkbox"/> No					

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



Houston, TX

01/02/20

The results set forth herein are provided by SGS North America Inc.

**e-Hardcopy 2.0**  
Automated Report**Technical Report for****Key Energy**

ETECH:New Mexico

Whites City Rd. Incident

SGS Job Number: TD48965

Sampling Date: 12/12/19

**Report to:****Key Energy**  
1301 McKinney Street  
Houston, TX 77010  
msticker@keyenergy.com; jbest@keyenergy.com

ATTN: Maury Sticker

Total number of pages in report: 120



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

**John Watson**  
Technical Director**Client Service contact: Electa Brown 713-271-4700**Certifications: TX (T104704220-19-34) AR (14-016-0) AZ (AZ0769) FL (E87628)  
KS (E-10366) LA (85695/04004) NJ (TX010) OK (2018-129) VA (10171)This report shall not be reproduced, except in its entirety, without the written approval of SGS.  
Test results relate only to samples analyzed.



# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Summary of Hits .....</b>	<b>5</b>
<b>Section 3: Sample Results .....</b>	<b>8</b>
<b>3.1:</b> TD48965-1: FL-1 .....	9
<b>3.2:</b> TD48965-2: FL-2 .....	13
<b>3.3:</b> TD48965-3: FL-3 .....	17
<b>3.4:</b> TD48965-4: FL-4 .....	21
<b>3.5:</b> TD48965-5: FL-5 .....	25
<b>3.6:</b> TD48965-6: FL-6 .....	29
<b>3.7:</b> TD48965-7: MW-1 .....	33
<b>3.8:</b> TD48965-8: MW-2 .....	37
<b>3.9:</b> TD48965-9: MW-3 .....	41
<b>3.10:</b> TD48965-10: MW-4 .....	45
<b>3.11:</b> TD48965-11: MW-5 .....	49
<b>3.12:</b> TD48965-12: MW-6 .....	53
<b>3.13:</b> TD48965-13: SW-1 .....	57
<b>3.14:</b> TD48965-14: SW-5 .....	61
<b>3.15:</b> TD48965-15: SW-6 .....	65
<b>3.16:</b> TD48965-16: WW .....	69
<b>3.17:</b> TD48965-17: FL-8 .....	73
<b>3.18:</b> TD48965-18: FL-7 .....	77
<b>Section 4: Misc. Forms .....</b>	<b>81</b>
<b>4.1:</b> Chain of Custody .....	82
<b>Section 5: MS Volatiles - QC Data Summaries .....</b>	<b>89</b>
<b>5.1:</b> Method Blank Summary .....	90
<b>5.2:</b> Blank Spike Summary .....	93
<b>5.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	96
<b>Section 6: General Chemistry - QC Data Summaries .....</b>	<b>99</b>
<b>6.1:</b> Method Blank and Spike Results Summary .....	100
<b>6.2:</b> Duplicate Results Summary .....	101
<b>6.3:</b> Matrix Spike Results Summary .....	102
<b>Section 7: Misc. Forms (SGS Scott, LA) .....</b>	<b>103</b>
<b>7.1:</b> Chain of Custody .....	104
<b>Section 8: GC Volatiles - QC Data (SGS Scott, LA) .....</b>	<b>107</b>
<b>8.1:</b> Method Blank Summary .....	108
<b>8.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	110
<b>8.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	112
<b>Section 9: GC/LC Semi-volatiles - QC Data (SGS Scott, LA) .....</b>	<b>114</b>
<b>9.1:</b> Method Blank Summary .....	115
<b>9.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	117

SGS North America Inc.

## Sample Summary

Key Energy

Job No: TD48965

ETECH:New Mexico

Project No: Whites City Rd. Incident

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
---------------	----------------	---------	----------	-------------	------	------------------

This report contains results reported as ND = Not detected. The following applies:

Organics ND = Not detected above the MDL

TD48965-1	12/12/19	14:30	12/17/19	SO	Soil	FL-1
TD48965-2	12/12/19	14:35	12/17/19	SO	Soil	FL-2
TD48965-3	12/12/19	14:40	12/17/19	SO	Soil	FL-3
TD48965-4	12/12/19	14:45	12/17/19	SO	Soil	FL-4
TD48965-5	12/12/19	14:50	12/17/19	SO	Soil	FL-5
TD48965-6	12/12/19	14:55	12/17/19	SO	Soil	FL-6
TD48965-7	12/12/19	15:00	12/17/19	SO	Soil	MW-1
TD48965-8	12/12/19	15:05	12/17/19	SO	Soil	MW-2
TD48965-9	12/12/19	15:10	12/17/19	SO	Soil	MW-3
TD48965-10	12/12/19	15:15	12/17/19	SO	Soil	MW-4
TD48965-11	12/12/19	15:20	12/17/19	SO	Soil	MW-5
TD48965-12	12/12/19	15:25	12/17/19	SO	Soil	MW-6

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



SGS North America Inc.

## Sample Summary

(continued)

Key Energy

Job No: TD48965

ETECH:New Mexico

Project No: Whites City Rd. Incident

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
TD48965-13	12/12/19	15:30	12/17/19	SO	Soil	SW-1
TD48965-14	12/12/19	15:50	12/17/19	SO	Soil	SW-5
TD48965-15	12/12/19	15:55	12/17/19	SO	Soil	SW-6
TD48965-16	12/12/19	16:00	12/17/19	SO	Soil	WW
TD48965-17	12/12/19	16:05	12/17/19	SO	Soil	FL-8
TD48965-18	12/12/19	16:05	12/17/19	SO	Soil	FL-7

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



**Summary of Hits**

Page 1 of 3

**Job Number:** TD48965  
**Account:** Key Energy  
**Project:** ETECH:New Mexico  
**Collected:** 12/12/19

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>TD48965-1</b>	<b>FL-1</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.68 J	5.7	0.49	mg/kg	SW846 8015C
Chloride		273	29		mg/kg	EPA 300.0
<b>TD48965-2</b>	<b>FL-2</b>					
TPH-DRO (C10-C28) <sup>a</sup>		2.69 J	6.0	0.51	mg/kg	SW846 8015C
Chloride		129	12		mg/kg	EPA 300.0
<b>TD48965-3</b>	<b>FL-3</b>					
TPH-DRO (C10-C28) <sup>a</sup>		2.22 J	5.8	0.50	mg/kg	SW846 8015C
TPH-ORO (> C28-C40) <sup>a</sup>		1.13 J	5.8	1.1	mg/kg	SW846 8015C
Chloride		1850	120		mg/kg	EPA 300.0
<b>TD48965-4</b>	<b>FL-4</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.41 J	6.0	0.52	mg/kg	SW846 8015C
Chloride		1700	120		mg/kg	EPA 300.0
<b>TD48965-5</b>	<b>FL-5</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.61 J	5.6	0.48	mg/kg	SW846 8015C
Chloride		145	11		mg/kg	EPA 300.0
<b>TD48965-6</b>	<b>FL-6</b>					
TPH-DRO (C10-C28) <sup>a</sup>		2.28 J	5.7	0.49	mg/kg	SW846 8015C
Chloride		127	11		mg/kg	EPA 300.0
<b>TD48965-7</b>	<b>MW-1</b>					
TPH-DRO (C10-C28) <sup>a</sup>		2.55 J	5.6	0.49	mg/kg	SW846 8015C
TPH-ORO (> C28-C40) <sup>a</sup>		1.51 J	5.6	1.0	mg/kg	SW846 8015C
Chloride		281	28		mg/kg	EPA 300.0
<b>TD48965-8</b>	<b>MW-2</b>					
TPH-DRO (C10-C28) <sup>a</sup>		2.20 J	5.4	0.47	mg/kg	SW846 8015C
Chloride		169	11		mg/kg	EPA 300.0
<b>TD48965-9</b>	<b>MW-3</b>					
TPH-DRO (C10-C28) <sup>a</sup>		8.99	5.6	0.49	mg/kg	SW846 8015C

**Summary of Hits**

Page 2 of 3

**Job Number:** TD48965  
**Account:** Key Energy  
**Project:** ETECH:New Mexico  
**Collected:** 12/12/19

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TPH-ORO (> C28-C40) <sup>a</sup> Chloride		2.74 J 424	5.6 28	1.0	mg/kg mg/kg	SW846 8015C EPA 300.0
<b>TD48965-10 MW-4</b>						
TPH-DRO (C10-C28) <sup>a</sup> TPH-ORO (> C28-C40) <sup>a</sup> Chloride		3.33 J 2.05 J 958	5.7 5.7 120	0.49 1.1	mg/kg mg/kg mg/kg	SW846 8015C SW846 8015C EPA 300.0
<b>TD48965-11 MW-5</b>						
TPH-DRO (C10-C28) <sup>a</sup> Chloride		1.82 J 22.3	5.6 5.6	0.48	mg/kg mg/kg	SW846 8015C EPA 300.0
<b>TD48965-12 MW-6</b>						
TPH-DRO (C10-C28) <sup>a</sup> Chloride		2.02 J 96.1	5.7 11	0.49	mg/kg mg/kg	SW846 8015C EPA 300.0
<b>TD48965-13 SW-1</b>						
TPH-DRO (C10-C28) <sup>a</sup> TPH-ORO (> C28-C40) <sup>a</sup> Chloride		3.27 J 2.13 J 4070	5.9 5.9 580	0.51 1.1	mg/kg mg/kg mg/kg	SW846 8015C SW846 8015C EPA 300.0
<b>TD48965-14 SW-5</b>						
TPH-DRO (C10-C28) <sup>a</sup> Chloride		1.19 J 1190	5.9 120	0.51	mg/kg mg/kg	SW846 8015C EPA 300.0
<b>TD48965-15 SW-6</b>						
TPH-DRO (C10-C28) <sup>a</sup> Chloride		3.84 J 297	5.8 29	0.50	mg/kg mg/kg	SW846 8015C EPA 300.0
<b>TD48965-16 WW</b>						
TPH-DRO (C10-C28) <sup>a</sup> TPH-ORO (> C28-C40) <sup>a</sup> Chloride		4.85 J 1.99 J 767	5.7 5.7 56	0.49 1.0	mg/kg mg/kg mg/kg	SW846 8015C SW846 8015C EPA 300.0
<b>TD48965-17 FL-8</b>						
TPH-DRO (C10-C28) <sup>a</sup> Chloride		3.62 J 47.6	5.7 5.8	0.49	mg/kg mg/kg	SW846 8015C EPA 300.0

Summary of Hits

Job Number: TD48965  
Account: Key Energy  
Project: ETECH:New Mexico  
Collected: 12/12/19

2

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

TD48965-18      FL-7

TPH-DRO (C10-C28) <sup>a</sup>	4.83 J	5.7	0.49	mg/kg	SW846 8015C
TPH-ORO (> C28-C40) <sup>a</sup>	1.80 J	5.7	1.1	mg/kg	SW846 8015C
Chloride	1120	58		mg/kg	EPA 300.0

(a) Analysis performed at SGS Scott, LA.



Houston, TX

Section 3



## Sample Results

## Report of Analysis

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-1	
<b>Lab Sample ID:</b>	TD48965-1	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 85.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109900.D	1	12/19/19 12:50	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.08 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00057	0.00040	mg/kg	
108-88-3	Toluene	ND	0.0046	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0046	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0046	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		59-126%
2037-26-5	Toluene-D8	101%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	104%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-1	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-1	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.8
<b>Method:</b>	SW846 8015C		
<b>Project:</b>	ETECH:New Mexico		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356781.D	1	12/26/19 16:21	ALA	n/a	n/a	L:GLA2844
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.70 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	7.0	3.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-1	
<b>Lab Sample ID:</b>	TD48965-1	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 85.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002342.D	1	12/21/19 16:49	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.68	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.7	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	54%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-1	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-1	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.8
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	273	29	mg/kg	5	12/19/19 23:12	PK	EPA 300.0
Solids, Percent	85.8		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-2	
<b>Lab Sample ID:</b>	TD48965-2	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 83.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	R03487753.D	1	12/19/19 14:38	SC	12/18/19 10:20	n/a	VR2353
Run #2							

	Initial Weight	Final Volume
Run #1	5.07 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00059	0.00041	mg/kg	
108-88-3	Toluene	ND	0.0047	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0047	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		59-126%
2037-26-5	Toluene-D8	96%		70-139%
460-00-4	4-Bromofluorobenzene	100%		63-138%
17060-07-0	1,2-Dichloroethane-D4	108%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-2	
<b>Lab Sample ID:</b>	TD48965-2	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 83.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356783.D	1	12/26/19 16:44	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.20 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.8	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-2	
<b>Lab Sample ID:</b>	TD48965-2	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 83.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002343.D	1	12/21/19 17:11	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.69	6.0	0.51	mg/kg	J
	TPH-ORO (> C28-C40)	ND	6.0	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	63%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
RL = Reporting Limit      B = Indicates analyte found in associated method blank  
E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-2	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-2	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	83.4
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	129	12	mg/kg	2	12/19/19 17:00	PK	EPA 300.0
Solids, Percent	83.4		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-3	
<b>Lab Sample ID:</b>	TD48965-3	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 84.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109904.D	1	12/19/19 15:33	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.03 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00059	0.00041	mg/kg	
108-88-3	Toluene	ND	0.0047	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0047	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		59-126%
2037-26-5	Toluene-D8	103%		70-139%
460-00-4	4-Bromofluorobenzene	94%		63-138%
17060-07-0	1,2-Dichloroethane-D4	107%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-3	
<b>Lab Sample ID:</b>	TD48965-3	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 84.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356785.D	1	12/26/19 17:06	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.80 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	7.1	3.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-3	
<b>Lab Sample ID:</b>	TD48965-3	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 84.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002344.D	1	12/21/19 17:34	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.22	5.8	0.50	mg/kg	J
	TPH-ORO (> C28-C40)	1.13	5.8	1.1	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	55%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-3	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-3	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	84.5
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	1850	120	mg/kg	20	12/19/19 17:17	PK	EPA 300.0
Solids, Percent	84.5		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-4	
<b>Lab Sample ID:</b>	TD48965-4	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 82.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109906.D	1	12/19/19 15:59	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.09 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00060	0.00042	mg/kg	
108-88-3	Toluene	ND	0.0048	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0048	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0048	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		59-126%
2037-26-5	Toluene-D8	103%		70-139%
460-00-4	4-Bromofluorobenzene	95%		63-138%
17060-07-0	1,2-Dichloroethane-D4	105%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-4	
<b>Lab Sample ID:</b>	TD48965-4	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 82.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356787.D	1	12/26/19 17:29	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.30 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.8	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-4	
<b>Lab Sample ID:</b>	TD48965-4	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 82.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002345.D	1	12/21/19 17:57	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.41	6.0	0.52	mg/kg	J
	TPH-ORO (> C28-C40)	ND	6.0	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	47%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-4	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-4	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	82.5
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	1700	120	mg/kg	20	12/19/19 17:34	PK	EPA 300.0
Solids, Percent	82.5		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-5	
<b>Lab Sample ID:</b>	TD48965-5	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 87.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109907.D	1	12/19/19 16:26	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.08 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00056	0.00039	mg/kg	
108-88-3	Toluene	ND	0.0045	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0045	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0045	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		59-126%
2037-26-5	Toluene-D8	102%		70-139%
460-00-4	4-Bromofluorobenzene	96%		63-138%
17060-07-0	1,2-Dichloroethane-D4	105%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-5	
<b>Lab Sample ID:</b>	TD48965-5	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 87.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356789.D	1	12/26/19 17:52	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.6	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value

RL = Reporting Limit      B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-5	
<b>Lab Sample ID:</b>	TD48965-5	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 87.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002349.D	1	12/21/19 19:27	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.61	5.6	0.48	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.6	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	53%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-5	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-5	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.4
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	145	11	mg/kg	2	12/19/19 18:25	PK	EPA 300.0
Solids, Percent	87.4		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-6	
<b>Lab Sample ID:</b>	TD48965-6	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 87.0
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109908.D	1	12/19/19 16:52	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.04 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00057	0.00040	mg/kg	
108-88-3	Toluene	ND	0.0046	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0046	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0046	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		59-126%
2037-26-5	Toluene-D8	100%		70-139%
460-00-4	4-Bromofluorobenzene	96%		63-138%
17060-07-0	1,2-Dichloroethane-D4	105%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-6	
<b>Lab Sample ID:</b>	TD48965-6	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 87.0
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356791.D	1	12/26/19 18:15	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.5	3.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
460-00-4	4-Bromofluorobenzene	97%		63-139%		
540-36-3	1,4-Difluorobenzene	94%		52-140%		

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-6	
<b>Lab Sample ID:</b>	TD48965-6	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 87.0
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002350.D	1	12/21/19 19:51	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.28	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.7	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	66%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-6	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-6	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.0
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	127	11	mg/kg	2	12/19/19 18:41	PK	EPA 300.0
Solids, Percent	87		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-1						
<b>Lab Sample ID:</b>	TD48965-7					<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	88.5
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109909.D	1	12/19/19 17:18	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.02 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00056	0.00039	mg/kg	
108-88-3	Toluene	ND	0.0045	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0045	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0045	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		59-126%
2037-26-5	Toluene-D8	101%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	110%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-1		
<b>Lab Sample ID:</b>	TD48965-7	<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b>	88.5
<b>Project:</b>	ETECH:New Mexico		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356793.D	1	12/26/19 18:37	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.4	3.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value

RL = Reporting Limit      B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-1	
<b>Lab Sample ID:</b>	TD48965-7	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 88.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002351.D	1	12/21/19 20:13	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.55	5.6	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	1.51	5.6	1.0	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	56%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-1	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-7	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	88.5
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	281	28	mg/kg	5	12/19/19 18:58	PK	EPA 300.0
Solids, Percent	88.5		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-2	
<b>Lab Sample ID:</b>	TD48965-8	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 90.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109910.D	1	12/19/19 17:44	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.01 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00055	0.00039	mg/kg	
108-88-3	Toluene	ND	0.0044	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0044	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0044	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		59-126%
2037-26-5	Toluene-D8	101%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	109%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-2	
<b>Lab Sample ID:</b>	TD48965-8	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 90.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356797.D	1	12/26/19 19:23	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.2	3.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-2	
<b>Lab Sample ID:</b>	TD48965-8	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 90.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002352.D	1	12/21/19 20:34	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.20	5.4	0.47	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.4	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	51%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-2	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-8	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	90.6
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	169	11	mg/kg	2	12/19/19 19:15	PK	EPA 300.0
Solids, Percent	90.6		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-3	
<b>Lab Sample ID:</b>	TD48965-9	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 88.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109911.D	1	12/19/19 18:10	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.03 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00056	0.00039	mg/kg	
108-88-3	Toluene	ND	0.0045	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0045	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0045	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		59-126%
2037-26-5	Toluene-D8	103%		70-139%
460-00-4	4-Bromofluorobenzene	96%		63-138%
17060-07-0	1,2-Dichloroethane-D4	109%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-3						
<b>Lab Sample ID:</b>	TD48965-9					<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8015C					<b>Percent Solids:</b>	88.1
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356799.D	1	12/26/19 19:46	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.80 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.6	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-3	
<b>Lab Sample ID:</b>	TD48965-9	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 88.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002353.D	1	12/21/19 20:56	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	8.99	5.6	0.49	mg/kg	
	TPH-ORO (> C28-C40)	2.74	5.6	1.0	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	48%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-3	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-9	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	88.1
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	424	28	mg/kg	5	12/19/19 19:32	PK	EPA 300.0
Solids, Percent	88.1		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-4	
<b>Lab Sample ID:</b>	TD48965-10	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 85.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109912.D	1	12/19/19 18:36	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00058	0.00041	mg/kg	
108-88-3	Toluene	ND	0.0047	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0047	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		59-126%
2037-26-5	Toluene-D8	101%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	107%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-4	
<b>Lab Sample ID:</b>	TD48965-10	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 85.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356801.D	1	12/26/19 20:08	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.80 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.9	3.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-4	
<b>Lab Sample ID:</b>	TD48965-10	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 85.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002354.D	1	12/21/19 21:17	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	3.33	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	2.05	5.7	1.1	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	54%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-4	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-10	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.7
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	958	120	mg/kg	20	12/19/19 19:49	PK	EPA 300.0
Solids, Percent	85.7		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-5	
<b>Lab Sample ID:</b>	TD48965-11	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 88.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109913.D	1	12/19/19 19:02	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.03 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00056	0.00039	mg/kg	
108-88-3	Toluene	ND	0.0045	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0045	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0045	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		59-126%
2037-26-5	Toluene-D8	101%		70-139%
460-00-4	4-Bromofluorobenzene	96%		63-138%
17060-07-0	1,2-Dichloroethane-D4	109%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-5	
<b>Lab Sample ID:</b>	TD48965-11	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 88.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356803.D	1	12/26/19 20:31	ALA	n/a	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.4	3.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		63-139%
540-36-3	1,4-Difluorobenzene	94%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-5	
<b>Lab Sample ID:</b>	TD48965-11	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 88.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002355.D	1	12/21/19 21:39	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.82	5.6	0.48	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.6	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	45%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-5	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-11	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	88.5
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	22.3	5.6	mg/kg	1	12/19/19 20:06	PK	EPA 300.0
Solids, Percent	88.5		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-6	
<b>Lab Sample ID:</b>	TD48965-12	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 87.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	Y1109914.D	1	12/19/19 19:28	SC	12/18/19 10:20	n/a	VY5254
Run #2							

	Initial Weight	Final Volume
Run #1	5.03 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00057	0.00040	mg/kg	
108-88-3	Toluene	ND	0.0045	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0045	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0045	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		59-126%
2037-26-5	Toluene-D8	102%		70-139%
460-00-4	4-Bromofluorobenzene	96%		63-138%
17060-07-0	1,2-Dichloroethane-D4	107%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-6	
<b>Lab Sample ID:</b>	TD48965-12	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 87.6
<b>Project:</b>	ETECH:New Mexico	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356805.D	1	12/26/19 20:54	ALA	n/a	n/a	L:GLA2844
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.4	3.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-6						
<b>Lab Sample ID:</b>	TD48965-12					<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8015C SW846 3546					<b>Percent Solids:</b>	87.6
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002356.D	1	12/21/19 22:00	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.02	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.7	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	42%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	MW-6	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-12	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.6
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	96.1	11	mg/kg	2	12/19/19 20:23	PK	EPA 300.0
Solids, Percent	87.6		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-1						
<b>Lab Sample ID:</b>	TD48965-13					<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	85.3
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	R03487786.D	1	12/20/19 13:23	SC	12/18/19 10:20	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00059	0.00041	mg/kg	
108-88-3	Toluene	ND	0.0047	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0047	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		59-126%
2037-26-5	Toluene-D8	91%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	108%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-1	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-13	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.3
<b>Method:</b>	SW846 8015C		
<b>Project:</b>	ETECH:New Mexico		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366773.D	1	12/26/19 18:44	ALA	n/a	n/a	L:GLE1951
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.8	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		63-139%
540-36-3	1,4-Difluorobenzene	90%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-1						
<b>Lab Sample ID:</b>	TD48965-13					<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8015C SW846 3546					<b>Percent Solids:</b>	85.3
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002357.D	1	12/21/19 22:22	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	3.27	5.9	0.51	mg/kg	J
	TPH-ORO (> C28-C40)	2.13	5.9	1.1	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	53%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-1	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-13	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.3
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	4070	580	mg/kg	100	12/19/19 20:40	PK	EPA 300.0
Solids, Percent	85.3		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-5						
<b>Lab Sample ID:</b>	TD48965-14					<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	84.1
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	R03487787.D	1	12/20/19 13:50	SC	12/18/19 10:20	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.03 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00059	0.00041	mg/kg	
108-88-3	Toluene	ND	0.0047	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0047	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		59-126%
2037-26-5	Toluene-D8	91%		70-139%
460-00-4	4-Bromofluorobenzene	98%		63-138%
17060-07-0	1,2-Dichloroethane-D4	107%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-5	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-14	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	84.1
<b>Method:</b>	SW846 8015C		
<b>Project:</b>	ETECH:New Mexico		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366774.D	1	12/26/19 19:11	ALA	n/a	n/a	L:GLE1951
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.9	3.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		63-139%
540-36-3	1,4-Difluorobenzene	91%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-5	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-14	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	84.1
<b>Method:</b>	SW846 8015C SW846 3546		
<b>Project:</b>	ETECH:New Mexico		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002358.D	1	12/21/19 22:43	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.19	5.9	0.51	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.9	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	37%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-5	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-14	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	84.1
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	1190	120	mg/kg	20	12/19/19 20:57	PK	EPA 300.0
Solids, Percent	84.1		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-6	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-15	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	86.0
<b>Method:</b>	SW846 8260C SW846 5030A		
<b>Project:</b>	ETECH:New Mexico		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	R03487788.D	1	12/20/19 14:17	SC	12/18/19 10:20	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.02 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00058	0.00041	mg/kg	
108-88-3	Toluene	ND	0.0046	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0046	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0046	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		59-126%
2037-26-5	Toluene-D8	91%		70-139%
460-00-4	4-Bromofluorobenzene	98%		63-138%
17060-07-0	1,2-Dichloroethane-D4	109%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-6	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-15	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	86.0
<b>Method:</b>	SW846 8015C		
<b>Project:</b>	ETECH:New Mexico		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366775.D	1	12/26/19 19:39	ALA	n/a	n/a	L:GLE1951
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.6	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		63-139%
540-36-3	1,4-Difluorobenzene	91%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-6	
<b>Lab Sample ID:</b>	TD48965-15	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 86.0
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002362.D	1	12/22/19 00:09	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	3.84	5.8	0.50	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.8	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	54%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-6	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-15	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	86.0
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	297	29	mg/kg	5	12/19/19 21:48	PK	EPA 300.0
Solids, Percent	86		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WW						
<b>Lab Sample ID:</b>	TD48965-16					<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	88.2
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	R03487789.D	1	12/20/19 14:44	SC	12/18/19 10:20	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.05 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00056	0.00039	mg/kg	
108-88-3	Toluene	ND	0.0045	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0045	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0045	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	98%		63-138%
17060-07-0	1,2-Dichloroethane-D4	109%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WW						
<b>Lab Sample ID:</b>	TD48965-16					<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8015C					<b>Percent Solids:</b>	88.2
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366776.D	1	12/26/19 20:07	ALA	n/a	n/a	L:GLE1951
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.80 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.6	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		63-139%
540-36-3	1,4-Difluorobenzene	90%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WW						
<b>Lab Sample ID:</b>	TD48965-16					<b>Date Sampled:</b>	12/12/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/17/19
<b>Method:</b>	SW846 8015C SW846 3546					<b>Percent Solids:</b>	88.2
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002363.D	1	12/22/19 00:31	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	4.85	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	1.99	5.7	1.0	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	53%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WW	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-16	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	88.2
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	767	56	mg/kg	10	12/19/19 22:04	PK	EPA 300.0
Solids, Percent	88.2		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-8	
<b>Lab Sample ID:</b>	TD48965-17	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 86.2
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	R03487790.D	1	12/20/19 15:11	SC	12/18/19 10:20	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.02 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00058	0.00040	mg/kg	
108-88-3	Toluene	ND	0.0046	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0046	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0046	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	98%		63-138%
17060-07-0	1,2-Dichloroethane-D4	110%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-8	
<b>Lab Sample ID:</b>	TD48965-17	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 86.2
<b>Project:</b>	ETECH:New Mexico	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366777.D	1	12/26/19 20:34	ALA	n/a	n/a	L:GLE1951
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.7	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		63-139%
540-36-3	1,4-Difluorobenzene	92%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-8	
<b>Lab Sample ID:</b>	TD48965-17	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 86.2
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002364.D	1	12/22/19 00:53	ALA	12/20/19 02:00	L:OP15900	L:GLG913
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	3.62	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.7	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	49%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-8	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-17	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	86.2
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	47.6	5.8	mg/kg	1	12/19/19 22:21	PK	EPA 300.0
Solids, Percent	86.2		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-7	
<b>Lab Sample ID:</b>	TD48965-18	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 85.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	R03487791.D	1	12/20/19 15:38	SC	12/18/19 10:20	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00058	0.00041	mg/kg	
108-88-3	Toluene	ND	0.0047	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0047	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	96%		63-138%
17060-07-0	1,2-Dichloroethane-D4	107%		54-123%

(a) Sample collected in bulk. All results are considered estimated values.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-7	
<b>Lab Sample ID:</b>	TD48965-18	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 85.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366778.D	1	12/26/19 21:02	ALA	n/a	n/a	L:GLE1951
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.10 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.6	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		63-139%
540-36-3	1,4-Difluorobenzene	90%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

3.18  
3

<b>Client Sample ID:</b>	FL-7	
<b>Lab Sample ID:</b>	TD48965-18	<b>Date Sampled:</b> 12/12/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/17/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 85.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002458.D	1	12/24/19 19:53	ALA	12/23/19 12:00	L:OP15919	L:GLG917
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	4.83	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	1.80	5.7	1.1	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
RL = Reporting Limit      B = Indicates analyte found in associated method blank  
E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-7	<b>Date Sampled:</b>	12/12/19
<b>Lab Sample ID:</b>	TD48965-18	<b>Date Received:</b>	12/17/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.6
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	1120	58	mg/kg	10	12/19/19 22:55	PK	EPA 300.0
Solids, Percent	85.6		%	1	12/19/19	LC	SM 2540 G

RL = Reporting Limit



Houston, TX

## Section 4

4

### Misc. Forms

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody



TD48965 PAGE 1 OF 2

[illegible]

## 4.4.1

Page 1 of 7

10654

DD4896 PAGE 2 OF 2



## CHAIN OF CUSTODY

10165 Harwin Dr, Ste 150 Houston, TX 77036  
TEL 713-271-4700 FAX 713-271-4770  
www.accutest.com

10165 Harwin Dr. Ste 150 Houston, TX 77036 TEL 713-271-4700 FAX 713-271-4770 www.acctest.com				FED-EX Tracking # Bottle Order Control # <b>EB-12414-34</b> Accutest Quote # Accutest Job # <b>Etech 12414439</b>							
Client / Reporting Information		Project Information		Requested Analyses				Matrix Codes			
Company Name <b>ETECH</b> Street Address <b>3100 Plains Hwy</b> City State Zip <b>Houston NM 88200</b> Project Contact E-mail <b>Joel Lowry joel@etechnm.com</b> Phone # Fax # <b>432-466-4450</b> Sampler(s) Name(s) Phone # <b>Joel Lowry</b>		Project Name <b>White's City Rd Incident</b> Street <b>Rural Eddy</b> City State <b>NM</b> Project # <b>YARD CODE:</b> Project Manager <b>Joel Lowry</b>		Billing Information (if different from Report to) Company Name <b>Key Energy</b> Street Address City State Zip <b>Houston TX</b> Attention <b>APInvoiceProcessing@keyenergy.com</b>		BTEX-8260 GRO-8015 DRO/ORO-8015 Chloride-IC300 DW - Drinking Water GW - Ground Water WW - Wastewater SW - Surface Water SO - Soil SL - Sludge SED - Sediment LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank				Matrix Codes LAB USE ONLY	
Field ID / Point of Collection Date Time Sampled By Matrix # of bottles 12 NW-6 12/17/19 3:25 SL S 4 13 SW-1 3:30 14 SW-5 3:40 15 SW-6 3:45 16 WW 4:00 17 FL-8 4:05 18 FL-7 4:05		Number of preserved bottles HCl NaOH ZnAcOH HNO3 H2SO4 NONE DI Water MECH TSP NH4CO ENCORE OTHER X									
Turnaround Time (Business days)		Data Deliverable Information		Comments / Special Instructions							
<input type="checkbox"/> Standard <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 4 Day RUSH <input type="checkbox"/> 3 Day RUSH <input checked="" type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day EMERGENCY Emergency & Rush TIA data available VIA Lablink		Approved By (Accutest PM) / Date: _____ _____ _____ _____ _____		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> TRRP <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> EDD Format <input type="checkbox"/> FULT1 (Level 3+4) <input type="checkbox"/> Other _____ <input type="checkbox"/> REDT1 (Level 3+4) <input type="checkbox"/> Commercial "C" Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial "C" = Results + QC & Surrogate Summary		KEYENTXH33361					
Sample Custody must be documented below each time samples change possession, including courier delivery.											
Relinquished by Sampler: 1 <b>Joel Lowry</b> Relinquished by Sampler: 3 Relinquished by: 5		Date Time: 2:15 12/16/19 Date Time: Date Time: Date Time:		Received By: 1 <b>Fedor</b> Received By: 3 Received By: 5		Relinquished By: 2 <b>Fedor</b> Relinquished By: 4 Custody Seal #		Date Time: 12/17/19 Date Time: Received By: 2 Received By: 4			
				<input type="checkbox"/> Intact <input type="checkbox"/> Not intact		Preserved where applicable <input type="checkbox"/>		On Ice <input type="checkbox"/>			

## TD48965: Chain of Custody

Page 2 of 7



## SGS Sample Receipt Summary

Job Number: TD48965 Client: ENTECH Project: WHILES CITY RD  
 Date / Time Received: 12/17/2019 11:55:00 AM Delv Method: FEDEX Airbill #'s: 493390069707,493390069660  
 # of Coolers: 2 Therm ID: IR-3; Temp Adjustment Factor: 0;

Cooler Temps (Initial/Adjusted): #1: (0.6/0.6); #2: (2.3/2.3);

Test Strip Lot #s: pH 1-12: pH 12+: Other: (Specify)

**Cooler Information**

	Y	or	N	N/A
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Cooler temp verification:				
3. Cooler media:	Ice (Bag)			

**Trip Blank Information**

	Y	or	N	N/A
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Type Of TB Received				

**Misc. Information**

Number of terracores: Number of Lab Filtered Metals:  
 Number of 5035 Field Kits:  
 Residual Chlorine Test Strip Lot #:

Comments

**Sample Information**

	Y	or	N	N/A
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Condition of sample:	Intact			
5. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
6. Dates/Times/IDs on COC match Sample Label	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
7. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
8. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
9. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
11. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
12. Special Instructions (compositing/filtering) clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Voa Soil Kits/Jars received past 48hrs?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
14. % Solids Jar received?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
15. Residual Chlorine Present?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

TD48965: Chain of Custody

Page 3 of 7

## Sample Receipt Log

Job #: TD48965

Date / Time Received: 12/17/2019 11:55:00 AM

Initials: BELINDG

Client: ENTECH

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD48965-1	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-1	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-1	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-1	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-2	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-2	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-2	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-2	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-3	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-3	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-3	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-3	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-4	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-4	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-4	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-4	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-5	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-5	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-5	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-5	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-6	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-6	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-6	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6

TD48965: Chain of Custody

Page 4 of 7

## Sample Receipt Log

Job #: TD48965

Date / Time Received: 12/17/2019 11:55:00 AM

Initials: BELINDG

Client: ENTECH

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD48965-6	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-7	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-7	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-7	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-7	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-8	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-8	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-8	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-8	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-9	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-9	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-9	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-9	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-10	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-10	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-10	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-10	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-11	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-11	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-11	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
1	TD48965-11	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	0.6	0	0.6
2	TD48965-12	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-12	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3

TD48965: Chain of Custody

Page 5 of 7

## Sample Receipt Log

Job #: TD48965

Date / Time Received: 12/17/2019 11:55:00 AM

Initials: BELINDG

Client: ENTECH

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
2	TD48965-12	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-12	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-13	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-13	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-13	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-13	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-14	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-14	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-14	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-14	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-15	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-15	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-15	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-15	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-16	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-16	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-16	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-16	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-17	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-17	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-17	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-17	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-18	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3

TD48965: Chain of Custody

Page 6 of 7

Sample Receipt Log

Job #: TD48965      Date / Time Received: 12/17/2019 11:55:00 AM      Initials: BELINDG  
Client: ENTECH

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
2	TD48965-18	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-18	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3
2	TD48965-18	4oz	4	2-101	N/P	Note #2 - Preservative check not applicable.	IR-3	2.3	0	2.3

4.1  
4

TD48965: Chain of Custody  
Page 7 of 7



Houston, TX

## Section 5

### MS Volatiles

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

**Method Blank Summary**

Page 1 of 1

**Job Number:** TD48965**Account:** KEYENTXH Key Energy**Project:** ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY5254-MB	Y1109899.D	1	12/19/19	SC	n/a	n/a	VY5254

**The QC reported here applies to the following samples:****Method:** SW846 8260C

TD48965-1, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.35	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	1.0	ug/kg	
108-88-3	Toluene	ND	4.0	0.92	ug/kg	
1330-20-7	Xylene (total)	ND	4.0	0.93	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	92% 59-126%
2037-26-5	Toluene-D8	102% 70-139%
460-00-4	4-Bromofluorobenzene	96% 63-138%
17060-07-0	1,2-Dichloroethane-D4	96% 54-123%

Method Blank Summary

Page 1 of 1

Job Number: TD48965  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR2353-MB	R03487752.D	1	12/19/19	SC	n/a	n/a	VR2353

The QC reported here applies to the following samples: Method: SW846 8260C

TD48965-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.35	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	1.0	ug/kg	
108-88-3	Toluene	ND	4.0	0.92	ug/kg	
1330-20-7	Xylene (total)	ND	4.0	0.93	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	110% 59-126%
2037-26-5	Toluene-D8	96% 70-139%
460-00-4	4-Bromofluorobenzene	97% 63-138%
17060-07-0	1,2-Dichloroethane-D4	106% 54-123%



Method Blank Summary

Job Number: TD48965  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR2354-MB	R03487781.D	1	12/20/19	SC	n/a	n/a	VR2354

The QC reported here applies to the following samples: Method: SW846 8260C

TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.35	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	1.0	ug/kg	
108-88-3	Toluene	ND	4.0	0.92	ug/kg	
1330-20-7	Xylene (total)	ND	4.0	0.93	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	104% 59-126%
2037-26-5	Toluene-D8	91% 70-139%
460-00-4	4-Bromofluorobenzene	96% 63-138%
17060-07-0	1,2-Dichloroethane-D4	102% 54-123%

**Blank Spike Summary**

Page 1 of 1

**Job Number:** TD48965**Account:** KEYENTXH Key Energy**Project:** ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY5254-BS	Y1109897.D	1	12/19/19	SC	n/a	n/a	VY5254

**The QC reported here applies to the following samples:****Method:** SW846 8260C

TD48965-1, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	33.0	66	58-124
100-41-4	Ethylbenzene	50	35.9	72	57-124
108-88-3	Toluene	50	35.1	70	67-119
1330-20-7	Xylene (total)	150	109	73	62-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	59-126%
2037-26-5	Toluene-D8	98%	70-139%
460-00-4	4-Bromofluorobenzene	101%	63-138%
17060-07-0	1,2-Dichloroethane-D4	100%	54-123%

\* = Outside of Control Limits.

**Blank Spike Summary**

Page 1 of 1

**Job Number:** TD48965

**Account:** KEYENTXH Key Energy

**Project:** ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR2353-BS	R03487749.D	1	12/19/19	SC	n/a	n/a	VR2353

The QC reported here applies to the following samples:

Method: SW846 8260C

TD48965-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	41.7	83	58-124
100-41-4	Ethylbenzene	50	42.5	85	57-124
108-88-3	Toluene	50	42.3	85	67-119
1330-20-7	Xylene (total)	150	128	85	62-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	115%	59-126%
2037-26-5	Toluene-D8	97%	70-139%
460-00-4	4-Bromofluorobenzene	98%	63-138%
17060-07-0	1,2-Dichloroethane-D4	105%	54-123%

\* = Outside of Control Limits.

Blank Spike Summary

Job Number: TD48965  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR2354-BS	R03487779.D	1	12/20/19	SC	n/a	n/a	VR2354

The QC reported here applies to the following samples: Method: SW846 8260C

TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	37.4	75	58-124
100-41-4	Ethylbenzene	50	35.5	71	57-124
108-88-3	Toluene	50	35.6	71	67-119
1330-20-7	Xylene (total)	150	108	72	62-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	109%	59-126%
2037-26-5	Toluene-D8	92%	70-139%
460-00-4	4-Bromofluorobenzene	99%	63-138%
17060-07-0	1,2-Dichloroethane-D4	102%	54-123%

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TD48965  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD48965-1MS	Y1109901.D	1	12/19/19	SC	n/a	n/a	VY5254
TD48965-1MSD	Y1109902.D	1	12/19/19	SC	n/a	n/a	VY5254
TD48965-1 <sup>a</sup>	Y1109900.D	1	12/19/19	SC	n/a	n/a	VY5254

The QC reported here applies to the following samples: Method: SW846 8260C

TD48965-1, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12

CAS No.	Compound	TD48965-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	57.4	33.2	58	57.7	32.8	57*	1	58-124/26
100-41-4	Ethylbenzene	ND	57.4	34.1	59	57.7	32.4	56*	5	57-124/29
108-88-3	Toluene	ND	57.4	36.4	63*	57.7	34.4	60*	6	67-119/28
1330-20-7	Xylene (total)	ND	172	103	60*	173	96.4	56*	7	62-120/27

CAS No.	Surrogate Recoveries	MS	MSD	TD48965-1	Limits
1868-53-7	Dibromofluoromethane	95%	101%	99%	59-126%
2037-26-5	Toluene-D8	101%	99%	101%	70-139%
460-00-4	4-Bromofluorobenzene	98%	99%	97%	63-138%
17060-07-0	1,2-Dichloroethane-D4	100%	107%	104%	54-123%

(a) Sample collected in bulk. All results are considered estimated values.

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD48974-1MS	R03487755.D	10	12/19/19	SC	n/a	n/a	VR2353
TD48974-1MSD	R03487756.D	10	12/19/19	SC	n/a	n/a	VR2353
TD48974-1 <sup>a</sup>	R03487754.D	10	12/19/19	SC	n/a	n/a	VR2353

The QC reported here applies to the following samples: Method: SW846 8260C

TD48965-2

CAS No.	Compound	TD48974-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	400 U	39900	33700	84	39900	34400	86	2	58-124/26
100-41-4	Ethylbenzene	3200 U	39900	34300	86	39900	35000	88	2	57-124/29
108-88-3	Toluene	3200 U	39900	34100	85	39900	34600	87	1	67-119/28
1330-20-7	Xylene (total)	3200 U	120000	104000	87	120000	106000	89	2	62-120/27

CAS No.	Surrogate Recoveries	MS	MSD	TD48974-1	Limits
1868-53-7	Dibromofluoromethane	109%	107%	106%	59-126%
2037-26-5	Toluene-D8	96%	95%	95%	70-139%
460-00-4	4-Bromofluorobenzene	100%	99%	97%	63-138%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	101%	54-123%

(a) Sample collected in bulk. All results are considered estimated values.

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD48974-2MS	R03487784.D	200	12/20/19	SC	n/a	n/a	VR2354
TD48974-2MSD	R03487785.D	200	12/20/19	SC	n/a	n/a	VR2354
TD48974-2	R03487782.D	200	12/20/19	SC	n/a	n/a	VR2354

The QC reported here applies to the following samples: Method: SW846 8260C

TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18

CAS No.	Compound	TD48974-2 ug/kg	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	8000 U	801000	671000	84	801000	644000	80	4	58-124/26
100-41-4	Ethylbenzene	64000 U	801000	644000	80	801000	621000	78	4	57-124/29
108-88-3	Toluene	64000 U	801000	640000	80	801000	617000	77	4	67-119/28
1330-20-7	Xylene (total)	64000 U	2400000	1950000	81	2400000	1900000	79	3	62-120/27

CAS No.	Surrogate Recoveries	MS	MSD	TD48974-2	Limits
1868-53-7	Dibromofluoromethane	104%	107%	104%	59-126%
2037-26-5	Toluene-D8	91%	92%	92%	70-139%
460-00-4	4-Bromofluorobenzene	99%	98%	96%	63-138%
17060-07-0	1,2-Dichloroethane-D4	100%	99%	101%	54-123%

\* = Outside of Control Limits.



Houston, TX

## Section 6

### General Chemistry

#### QC Data Summaries

---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries



METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD48965  
Account: KEYENTXH - Key Energy  
Project: ETECH:New Mexico

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP56083/GN3291	5.0	0.0	mg/kg	100	93.5	93.5	90-110%

Associated Samples:  
Batch GP56083: TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12, TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18  
(\*) Outside of QC limits

6.1  
6

DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD48965  
Account: KEYENTXH - Key Energy  
Project: ETECH:New Mexico

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP56083/GN3291	TD48965-1	mg/kg	273	270	1.1	0-20%
Solids, Percent	GN3261	TD48965-1	%	85.8	85.5	0.4	0-5%

Associated Samples:  
Batch GN3261: TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12, TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18  
Batch GP56083: TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12, TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18  
(\*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD48965  
Account: KEYENTXH - Key Energy  
Project: ETECH:New Mexico

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP56083/GN3291	TD48965-1	mg/kg	273	116	377	89.8	80-120%

Associated Samples:  
Batch GP56083: TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12, TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18  
(\*) Outside of QC limits  
(N) Matrix Spike Rec. outside of QC limits

6.3  
6



Houston, TX

## Section 7

### Misc. Forms

### Custody Documents and Other Forms

(SGS Scott, LA)

---

Includes the following where applicable:

- Chain of Custody



## CHAIN OF CUSTODY

Page 1 of 2

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)												Matrix Codes									
Company Name: <b>SGS North America Inc.</b>		Project Name: <b>ETECH New Mexico</b>														DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB-Field Blank EB-Equipment Blank RB- Rinse Blank TB-Trip Blank									
Street Address <b>10165 Harwin Drive</b>		Street																							
City State Zip <b>Houston TX 77036</b>		City State																							
Project Contact <b>electa.brown@sgs.com</b>		Project #																							
Phone # <b>713-271-4700</b>		Client Purchase Order #																							
Sampler(s) Name(s)		Project Manager																							
SGS Sample #		Field ID / Point of Collection		MECH/ID Vial #		Collection		Date		Time		Sampled by		Matrix		# of bottles		Number of preserved bottles		Bottle Order Control #		SGS Job #		TD48965	

SGS

## CHAIN OF CUSTODY

Page 2 of 2

Client / Client / Reporting Information										Project Information										Requested Analysis (see TEST CODE sheet)										Matrix Codes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Company Name: <b>SGS North America Inc.</b>										Project Name: <b>ETECH New Mexico</b>										<b>B0015DRO BCC-ORO V8015GRO</b>										<b>LAB USE ONLY</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Street Address: <b>10165 Harwin Drive</b>										Street: City: State: Zip:																														Billing Information (if different from Report to): Company Name: Street Address: City: State: Zip:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
City: State: Zip: <b>Houston TX 77036</b>										Project #:																														Client Purchase Order #:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Project Contact: <b>electa.brown@sgs.com</b>										E-mail:																														Attention:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Phone #: <b>713-271-4700</b>										Fax #:																														City: State: Zip:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Sample(s) Name(s):										Project Manager:										City: State: Zip:										City: State: Zip:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
SGS Sample #										Field ID / Point of Collection										MECH/ID Vial #										Collection										Number of preserved Bottles																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
																														Date										Time										Sampled by										Matrix										# of bottles										PC1										PC2										PC3										PC4										PC5										PC6										PC7										PC8										PC9										PC10										PC11										PC12										PC13										PC14										PC15										PC16										PC17										PC18										PC19										PC20										PC21										PC22										PC23										PC24										PC25										PC26										PC27										PC28										PC29										PC30										PC31										PC32										PC33										PC34										PC35										PC36										PC37										PC38										PC39										PC40										PC41										PC42										PC43										PC44										PC45										PC46										PC47										PC48										PC49										PC50										PC51										PC52										PC53										PC54										PC55										PC56										PC57										PC58										PC59										PC60										PC61										PC62										PC63										PC64										PC65										PC66										PC67										PC68										PC69										PC70										PC71										PC72										PC73										PC74										PC75										PC76										PC77										PC78										PC79										PC80										PC81										PC82										PC83										PC84										PC85										PC86										PC87										PC88										PC89										PC90										PC91										PC92										PC93										PC94										PC95										PC96										PC97										PC98										PC99										PC100										PC101										PC102										PC103										PC104										PC105										PC106										PC107										PC108										PC109										PC110										PC111										PC112										PC113										PC114										PC115										PC116										PC117										PC118										PC119										PC120										PC121										PC122										PC123										PC124										PC125										PC126										PC127										PC128										PC129										PC130										PC131										PC132										PC133										PC134										PC135										PC136										PC137										PC138										PC139										PC140										PC141										PC142										PC143										PC144										PC145										PC146										PC147										PC148										PC149										PC150										PC151										PC152										PC153										PC154										PC155										PC156										PC157										PC158										PC159										PC160										PC161										PC162										PC163										PC164										PC165										PC166										PC167										PC168										PC169										PC170										PC171										PC172										PC173										PC174										PC175										PC176										PC177										PC178										PC179										PC180										PC181										PC182										PC183										PC184										PC185										PC186										PC187										PC188										PC189										PC190										PC191										PC192										PC193										PC194										PC195										PC196										PC197										PC198										PC199										PC200										PC201										PC202										PC203										PC204										PC205										PC206										PC207										PC208										PC209										PC210										PC211										PC212										PC213										PC214										PC215										PC216										PC217										PC218										PC219										PC220										PC221										PC222										PC223										PC224										PC225										PC226										PC227										PC228										PC229										PC230										PC231										PC232										PC233										PC234										PC235										PC236										PC237										PC238										PC239										PC240										PC241										PC242										PC243										PC244										PC245										PC246										PC247										PC248										PC249										PC250										PC251										PC252										PC253										PC254										PC255										PC256										PC257										PC258										PC259										PC260										PC261										PC262										PC263										PC264										PC265										PC266										PC267										PC268										PC269										PC270										PC271										PC272										PC273										PC274										PC275										PC276										PC277										PC278										PC279										PC280										PC281										PC282										PC283										PC284										PC285										PC286										PC287										PC288										PC289										PC290										PC291										PC292										PC293										PC294										PC295										PC296										PC297										PC298										PC299										PC300										PC301										PC302										PC303										PC304										PC305										PC306										PC307										PC308										PC309										PC310										PC311										PC312										PC313										PC314										PC315										PC316										PC317										PC318										PC319										PC320										PC321										PC322										PC323										PC324										PC325										PC326										PC327										PC328										PC329										PC330										PC331										PC332										PC333										PC334										PC335										PC336										PC337										PC338										PC339										PC340										PC341										PC342										PC343										PC344										PC345										PC346										PC347										PC348										PC349										PC350										PC351										PC352										PC353										PC354										PC355										PC356										PC357										PC358										PC359										PC360										PC361										PC362										PC363										PC364										PC365										PC366										PC367										PC368										PC369										PC370										PC371										PC372										PC373										PC374										PC375										PC376										PC377										PC378										PC379										PC380										PC381										PC382										PC383										PC384										PC385										PC386										PC387										PC388										PC389										PC390										PC391										PC392										PC393										PC394										PC395										PC396										PC397										PC398										PC399										PC400										PC401										PC402										PC403										PC404										PC405										PC406										PC407										PC408										PC409										PC410										PC411										PC412										PC413										PC414										PC415										PC416										PC417										PC418										PC419										PC420										PC421										PC422										PC423										PC424										PC425										PC426										PC427										PC428										PC429										PC430										PC431										PC432										PC433										PC434										PC435										PC436										PC437										PC438										PC439										PC440										PC441										PC442										PC443										PC444										PC445										PC446										PC447										PC448										PC449										PC450										PC451										PC452										PC453										PC454										PC455										PC456										PC457										PC458										PC459										PC460										PC461										PC462										PC463										PC464										PC465										PC466										PC467										PC468										PC469										PC470										PC471										PC472										PC473										PC474										PC475										PC476										PC477										PC478										PC479										PC480										PC481										PC482										PC483										PC484										PC485										PC486										PC487										PC488										PC489										PC490										PC491										PC492										PC493										PC494										PC495										PC496										PC497										PC498										PC499										PC500										PC501										PC502										PC503										PC504										PC505										PC506										PC507										PC508										PC509										PC510										PC511										PC512										PC513										PC514										PC515										PC516										PC517										PC518										PC519										PC520										PC521										PC522										PC523										PC524										PC525										PC526										PC527										PC528										PC529										PC530										PC531										PC532										PC533										PC534										PC535										PC536										PC537										PC538										PC539										PC540										PC541										PC542										PC543										PC544										PC545										PC546										PC547										PC548										PC549										PC550										PC551										PC552										PC553										PC554										PC555										PC556										PC557										PC558										PC559										PC560										PC561										PC562										PC563										PC564										PC565										PC566										PC567										PC568										PC569										PC570										PC571										PC572										PC573										PC574										PC575										PC576										PC577										PC578										PC579										PC580										PC581										PC582										PC583										PC584										PC585										PC586										PC587										PC588										PC589										PC590										PC591										PC592										PC593										PC594										PC595										PC596										PC597										PC598										PC599										PC600										PC601										PC602										PC603										PC604										PC605										PC606										PC607										PC608										PC609										PC610										PC611										PC612										PC613										PC614										PC615										PC616										PC617										PC618										PC619										PC620										PC621										PC622										PC623										PC624										PC625										PC626										PC627										PC628										PC629										PC630										PC631										PC632										PC633										PC634										PC635										PC636										PC637										PC638										PC639										PC640										PC641										PC642										PC643										PC644										PC645										PC646										PC647										PC648										PC649										PC650										PC651										PC652										PC653										PC654										PC655										PC656										PC657										PC658										PC659										PC660										PC661										PC662										PC663										PC664										PC665										PC666										PC667										PC668										PC669										PC670										PC671										PC672										PC673										PC674										PC675										PC676										PC677										PC678										PC679										PC680										PC681										PC682										PC683										PC684										PC685										PC686										PC687										PC688										PC689										PC690										PC691										PC692										PC693										PC694										PC695										PC696										PC697										PC698										PC699										PC700										PC701										PC702										PC703										PC704										PC705										PC706										PC707										PC708										PC709										PC710										PC711										PC712										PC713										PC714										PC715										PC716										PC717										PC718										PC719										PC720										PC721										PC722										PC723										PC724										PC725										PC726										PC727										PC728										PC729										PC730										PC731										PC732										PC733										PC734										PC735										PC736										PC737										PC738										PC739										PC740										PC741										PC742										PC743										PC744										PC745										PC746										PC747										PC748										PC749										PC750										PC751										PC752										PC753										PC754										PC755										PC756										PC757										PC758										PC759										PC760										PC761										PC762										PC763										PC764										PC765										PC766										PC767										PC768										PC769										PC770										PC771										PC772										PC773										PC774										PC775										PC776										PC777										PC778										PC779										PC780										PC781										PC782										PC783										PC784										PC785										PC786										PC787										PC788										PC789										PC790										PC791										PC792										PC793										PC794										PC795										PC796										PC797										PC798										PC799										PC800										PC801										PC802										PC803										PC804										PC805										PC806										PC807										PC808										PC809										PC810										PC811										PC812										PC813										PC814										PC815										PC816										PC817										PC818										PC819										PC820										PC821										PC822										PC823										PC824										PC825										PC826										PC827										PC828										PC829										PC830										PC831										PC832										PC833										PC834										PC835										PC836										PC837										PC838										PC839										PC840										PC841										PC842										PC843										PC844										PC845										PC846										PC847										PC848										PC849										PC850										PC851										PC852										PC853										PC854										PC855										PC856										PC857										PC858										PC859										PC860										PC861										PC862										PC863										PC864										PC865										PC866										PC867										PC868										PC869										PC870										PC871										PC872										PC873										PC874										PC875										PC876										PC877										PC878										PC879										PC880										PC881										PC882										PC883										PC884										PC885										PC886										PC887										PC888										PC889										PC890										PC891										PC892										PC893										PC894										PC895										PC896										PC8									

SGS Sample Receipt Summary

Job Number: TD48965

Client: SGS NORTH AMERICA

Project: NEW MEXICO

Date / Time Received: 12/19/2019 7:00:00 AM

Delivery Method: Accutest Courier

Airbill #s:

Cooler Temps (Initial/Adjusted): #1: (1.8/1.8); #2: (2.4/2.4); DV439

Cooler Security

Y or N

Y or N

1. Custody Seals Present:

☒

☐

3. COC Present:

☒

☐

2. Custody Seals Intact:

☒

☐

4. Smpl Dates/Time OK

☒

☐

Cooler Temperature

Y or N

1. Temp criteria achieved:

☒

☐

2. Thermometer ID:

DV439;

3. Cooler media:

Ice (direct contact)

4. No. Coolers:

2

Quality Control Preservation

Y

or N

N/A

1. Trip Blank present / cooler:

☐

☐

☒

2. Trip Blank listed on COC:

☐

☐

☒

3. Samples preserved properly:

☒

☐

4. VOCs headspace free:

☐

☐

☒

Sample Integrity - Documentation

Y

or N

1. Sample labels present on bottles:

☒

☐

2. Container labeling complete:

☒

☐

3. Sample container label / COC agree:

☒

☐

Sample Integrity - Condition

Y

or N

1. Sample recvd within HT:

☒

☐

2. All containers accounted for:

☒

☐

3. Condition of sample:

Intact

Sample Integrity - Instructions

Y

or N

N/A

1. Analysis requested is clear:

☒

☐

2. Bottles received for unspecified tests

☐

☒

3. Sufficient volume recvd for analysis:

☒

☐

4. Compositing instructions clear:

☐

☐

☒

5. Filtering instructions clear:

☐

☐

☒

Comments



Houston, TX

## Section 8

### GC Volatiles

#### QC Data Summaries

(SGS Scott, LA)

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



Method Blank Summary

Page 1 of 1

Job Number: TD48965  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLA2844-MB1	LA356761.D	1	12/26/19	NN	n/a	n/a	GLA2844

The QC reported here applies to the following samples: Method: SW846 8015C

TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	2.75	5.0	2.4	mg/kg	J

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 63-139%
540-36-3	1,4-Difluorobenzene	98% 52-140%

8.1.1  
8

Method Blank Summary

Page 1 of 1

Job Number: TD48965

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLE1951-MB1	LE366772.D	1	12/26/19	NN	n/a	n/a	GLE1951

The QC reported here applies to the following samples:

Method: SW846 8015C

TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	3.78	5.0	2.4	mg/kg	J

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	92% 63-139%
540-36-3	1,4-Difluorobenzene	92% 52-140%

8.1.2

8

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLA2844-BS2	LA356807.D	1	12/26/19	NN	n/a	n/a	GLA2844
GLA2844-BSD2	LA356809.D	1	12/26/19	NN	n/a	n/a	GLA2844

The QC reported here applies to the following samples: Method: SW846 8015C

TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	50	46.9	94	46.2	92	2	79-121/6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	96%	63-139%
540-36-3	1,4-Difluorobenzene	98%	98%	52-140%

\* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLE1951-BS1	LE366782.D	1	12/26/19	NN	n/a	n/a	GLE1951
GLE1951-BSD1	LE366783.D	1	12/26/19	NN	n/a	n/a	GLE1951

The QC reported here applies to the following samples: Method: SW846 8015C

TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	50	44.5	89	44.2	88	1	79-121/6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	99%	63-139%
540-36-3	1,4-Difluorobenzene	99%	97%	52-140%

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA60258-19MS	LE366789.D	1	12/27/19	NN	n/a	n/a	GLE1951
LA60258-19MSD	LE366790.D	1	12/27/19	NN	n/a	n/a	GLE1951
LA60258-19	LE366793.D	1	12/27/19	NN	n/a	n/a	GLE1951

The QC reported here applies to the following samples:

Method: SW846 8015C

TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17, TD48965-18

CAS No.	Compound	LA60258-19 mg/kg	Spike Q	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	96.2	83.0	86	96.2	82.4	86	1	79-121/6

CAS No.	Surrogate Recoveries	MS	MSD	LA60258-19	Limits
460-00-4	4-Bromofluorobenzene	103%	102%	91%	63-139%
540-36-3	1,4-Difluorobenzene	99%	98%	92%	52-140%

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

	Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
(a)	TD49110-4MS	LA356949.D	1	12/28/19	NN	n/a	n/a	GLA2844
(a)	TD49110-4MSD	LA356951.D	1	12/28/19	NN	n/a	n/a	GLA2844
	TD49110-4	LA356829.D	1	12/27/19	NN	n/a	n/a	GLA2844

The QC reported here applies to the following samples:

Method: SW846 8015C

TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12

CAS No.	Compound	TD49110-4 mg/kg	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	693	587	85	693	600	87	2	79-121/6

CAS No.	Surrogate Recoveries	MS	MSD	TD49110-4	Limits
460-00-4	4-Bromofluorobenzene	98%	99%	97%	63-139%
540-36-3	1,4-Difluorobenzene	100%	99%	95%	52-140%

(a) SAMPLE NOT YET APPROVED BY LAB. DO NOT REPORT.

\* = Outside of Control Limits.



Houston, TX

## Section 9

### GC/LC Semi-volatiles

#### QC Data Summaries

(SGS Scott, LA)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

6

Method Blank Summary

Job Number: TD48965  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15900-MB	LG002336.D	1	12/21/19	PC	12/20/19	OP15900	GLG913

The QC reported here applies to the following samples: Method: SW846 8015C

TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12, TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.671	5.0	0.43	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.0	0.92	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	69% 31-127%

9.1.1  
9



Method Blank Summary

Page 1 of 1

Job Number: TD48965  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15919-MB	LG002453.D	1	12/24/19	PC	12/23/19	OP15919	GLG917

The QC reported here applies to the following samples: Method: SW846 8015C  
TD48965-18

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	5.0	0.43	mg/kg	
	TPH-ORO (> C28-C40)	ND	5.0	0.92	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	71% 31-127%

9.1.2  
9

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15900-BS1	LG002337.D	1	12/21/19	PC	12/20/19	OP15900	GLG913
OP15900-BSD1	LG002338.D	1	12/21/19	PC	12/20/19	OP15900	GLG913

The QC reported here applies to the following samples: Method: SW846 8015C

TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12, TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	149	125	84	144	96	14	49-118/19

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	74%	84%	31-127%

\* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15900-BS2	LG002339.D	1	12/21/19	PC	12/20/19	OP15900	GLG913
OP15900-BSD2	LG002340.D	1	12/21/19	PC	12/20/19	OP15900	GLG913

The QC reported here applies to the following samples: Method: SW846 8015C

TD48965-1, TD48965-2, TD48965-3, TD48965-4, TD48965-5, TD48965-6, TD48965-7, TD48965-8, TD48965-9, TD48965-10, TD48965-11, TD48965-12, TD48965-13, TD48965-14, TD48965-15, TD48965-16, TD48965-17

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-ORO (> C28-C40)	59.4	57.0	96	63.2	106	10	60-127/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	68%	72%	31-127%

\* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15919-BS1	LG002454.D	1	12/24/19	PC	12/23/19	OP15919	GLG917
OP15919-BSD1	LG002455.D	1	12/24/19	PC	12/23/19	OP15919	GLG917

The QC reported here applies to the following samples: Method: SW846 8015C

TD48965-18

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	150	125	83	121	81	3	49-118/19

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	74%	72%	31-127%

\* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD48965  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15919-BS2	LG002456.D	1	12/24/19	PC	12/23/19	OP15919	GLG917
OP15919-BSD2	LG002457.D	1	12/24/19	PC	12/23/19	OP15919	GLG917

The QC reported here applies to the following samples: Method: SW846 8015C

TD48965-18

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-ORO (> C28-C40)	59.1	58.9	100	57.9	97	2	60-127/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	72%	71%	31-127%

\* = Outside of Control Limits.



Houston, TX

01/02/20

The results set forth herein are provided by SGS North America Inc.

**e-Hardcopy 2.0**  
Automated Report**Technical Report for****Key Energy**

ETECH:New Mexico

Whites City Rd. Incident

SGS Job Number: TD49110

Sampling Date: 12/16/19

**Report to:**

Key Energy  
1301 McKinney Street  
Houston, TX 77010  
msticker@keyenergy.com; jbest@keyenergy.com  
  
ATTN: Maury Sticker

Total number of pages in report: 77



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

John Watson  
Technical Director

**Client Service contact: Electa Brown 713-271-4700**

Certifications: TX (T104704220-19-34) AR (14-016-0) AZ (AZ0769) FL (E87628)  
KS (E-10366) LA (85695/04004) NJ (TX010) OK (2018-129) VA (10171)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.  
Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Summary of Hits .....</b>	<b>4</b>
<b>Section 3: Sample Results .....</b>	<b>6</b>
<b>3.1:</b> TD49110-1: NW-7 .....	7
<b>3.2:</b> TD49110-2: NW-8 .....	11
<b>3.3:</b> TD49110-3: NW-9 .....	15
<b>3.4:</b> TD49110-4: NW-10 .....	19
<b>3.5:</b> TD49110-5: NW-11 .....	23
<b>3.6:</b> TD49110-6: FL-9 .....	27
<b>3.7:</b> TD49110-7: FL-10 .....	31
<b>3.8:</b> TD49110-8: FL-11 .....	35
<b>3.9:</b> TD49110-9: FL-12 .....	39
<b>3.10:</b> TD49110-10: FL-13 .....	43
<b>3.11:</b> TD49110-11: FL-14 .....	47
<b>Section 4: Misc. Forms .....</b>	<b>51</b>
<b>4.1:</b> Chain of Custody .....	52
<b>Section 5: MS Volatiles - QC Data Summaries .....</b>	<b>56</b>
<b>5.1:</b> Method Blank Summary .....	57
<b>5.2:</b> Blank Spike Summary .....	58
<b>5.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	59
<b>Section 6: General Chemistry - QC Data Summaries .....</b>	<b>60</b>
<b>6.1:</b> Method Blank and Spike Results Summary .....	61
<b>6.2:</b> Duplicate Results Summary .....	62
<b>6.3:</b> Matrix Spike Results Summary .....	63
<b>Section 7: Misc. Forms (SGS Scott, LA) .....</b>	<b>64</b>
<b>7.1:</b> Chain of Custody .....	65
<b>Section 8: GC Volatiles - QC Data (SGS Scott, LA) .....</b>	<b>67</b>
<b>8.1:</b> Method Blank Summary .....	68
<b>8.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	70
<b>8.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	72
<b>Section 9: GC/LC Semi-volatiles - QC Data (SGS Scott, LA) .....</b>	<b>74</b>
<b>9.1:</b> Method Blank Summary .....	75
<b>9.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	76



SGS North America Inc.

## Sample Summary

Key Energy

Job No: TD49110

ETECH:New Mexico

Project No: Whites City Rd. Incident

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
---------------	----------------	---------	----------	-------------	------	------------------

This report contains results reported as ND = Not detected. The following applies:

Organics ND = Not detected above the MDL

TD49110-1	12/16/19	10:00	12/19/19	SO	Soil	NW-7
TD49110-2	12/16/19	10:20	12/19/19	SO	Soil	NW-8
TD49110-3	12/16/19	10:40	12/19/19	SO	Soil	NW-9
TD49110-4	12/16/19	11:00	12/19/19	SO	Soil	NW-10
TD49110-5	12/16/19	11:20	12/19/19	SO	Soil	NW-11
TD49110-6	12/16/19	11:40	12/19/19	SO	Soil	FL-9
TD49110-7	12/16/19	12:00	12/19/19	SO	Soil	FL-10
TD49110-8	12/16/19	12:20	12/19/19	SO	Soil	FL-11
TD49110-9	12/16/19	12:40	12/19/19	SO	Soil	FL-12
TD49110-10	12/16/19	13:00	12/19/19	SO	Soil	FL-13
TD49110-11	12/16/19	13:20	12/19/19	SO	Soil	FL-14

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



**Summary of Hits**

Page 1 of 2

**Job Number:** TD49110  
**Account:** Key Energy  
**Project:** ETECH:New Mexico  
**Collected:** 12/16/19

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>TD49110-1 NW-7</b>						
TPH-GRO (C6-C10) <sup>a</sup>		7.87	6.6	3.2	mg/kg	SW846 8015C
TPH-DRO (C10-C28) <sup>a</sup>		2.16 J	5.7	0.49	mg/kg	SW846 8015C
TPH-ORO (> C28-C40) <sup>a</sup>		1.33 J	5.7	1.1	mg/kg	SW846 8015C
Chloride		502	57		mg/kg	EPA 300.0
<b>TD49110-2 NW-8</b>						
TPH-GRO (C6-C10) <sup>a</sup>		5.47 J	6.2	3.0	mg/kg	SW846 8015C
TPH-DRO (C10-C28) <sup>a</sup>		2.48 J	5.4	0.47	mg/kg	SW846 8015C
Chloride		38.9	11		mg/kg	EPA 300.0
<b>TD49110-3 NW-9</b>						
TPH-DRO (C10-C28) <sup>a</sup>		2.60 J	5.3	0.46	mg/kg	SW846 8015C
TPH-ORO (> C28-C40) <sup>a</sup>		2.31 J	5.3	0.98	mg/kg	SW846 8015C
Chloride		50.1	11		mg/kg	EPA 300.0
<b>TD49110-4 NW-10</b>						
TPH-DRO (C10-C28) <sup>a</sup>		2.16 J	5.8	0.50	mg/kg	SW846 8015C
TPH-ORO (> C28-C40) <sup>a</sup>		1.70 J	5.8	1.1	mg/kg	SW846 8015C
Chloride		55.6	12		mg/kg	EPA 300.0
<b>TD49110-5 NW-11</b>						
TPH-GRO (C6-C10) <sup>a</sup>		3.33 J	6.8	3.3	mg/kg	SW846 8015C
TPH-DRO (C10-C28) <sup>a</sup>		1.56 J	5.9	0.51	mg/kg	SW846 8015C
TPH-ORO (> C28-C40) <sup>a</sup>		1.46 J	5.9	1.1	mg/kg	SW846 8015C
Chloride		101	12		mg/kg	EPA 300.0
<b>TD49110-6 FL-9</b>						
TPH-DRO (C10-C28) <sup>a</sup>		0.865 J	5.3	0.45	mg/kg	SW846 8015C
Chloride		616	52		mg/kg	EPA 300.0
<b>TD49110-7 FL-10</b>						
TPH-GRO (C6-C10) <sup>a</sup>		4.34 J	6.6	3.2	mg/kg	SW846 8015C
TPH-DRO (C10-C28) <sup>a</sup>		1.66 J	5.7	0.49	mg/kg	SW846 8015C
Chloride		165	29		mg/kg	EPA 300.0

**Summary of Hits**

Page 2 of 2

**Job Number:** TD49110  
**Account:** Key Energy  
**Project:** ETECH:New Mexico  
**Collected:** 12/16/19

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD49110-8	FL-11					
TPH-DRO (C10-C28) <sup>a</sup> Chloride		1.44 J 192	5.7 29	0.49	mg/kg mg/kg	SW846 8015C EPA 300.0
TD49110-9	FL-12					
TPH-DRO (C10-C28) <sup>a</sup> Chloride		2.49 J 27.7	5.9 12	0.51	mg/kg mg/kg	SW846 8015C EPA 300.0
TD49110-10	FL-13					
TPH-DRO (C10-C28) <sup>a</sup> Chloride		2.09 J 26.8	6.4 6.3	0.55	mg/kg mg/kg	SW846 8015C EPA 300.0
TD49110-11	FL-14					
TPH-DRO (C10-C28) <sup>a</sup> Chloride		1.50 J 29.2	5.6 5.6	0.48	mg/kg mg/kg	SW846 8015C EPA 300.0

(a) Analysis performed at SGS Scott, LA.

**SGS**

Houston, TX

**Section 3**



Sample Results

Report of Analysis

**SGS**

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-7	
<b>Lab Sample ID:</b>	TD49110-1	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 87.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487792.D	1	12/20/19 16:05	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.01 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00057	0.00040	mg/kg	
108-88-3	Toluene	ND	0.0046	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0046	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0046	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	98%		63-138%
17060-07-0	1,2-Dichloroethane-D4	110%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-7	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-1	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.4
<b>Method:</b>	SW846 8015C SW846 5035		
<b>Project:</b>	ETECH:New Mexico		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356823.D	1	12/27/19 00:20	ALA	12/20/19 16:50	n/a	L:GLA2844
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	7.87	6.6	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		63-139%
540-36-3	1,4-Difluorobenzene	97%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-7	
<b>Lab Sample ID:</b>	TD49110-1	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 87.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002384.D	1	12/22/19 15:36	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.16	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	1.33	5.7	1.1	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	66%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-7	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-1	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.4
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	502	57	mg/kg	10	12/20/19 22:01	PK	EPA 300.0
Solids, Percent	87.4		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-8	
<b>Lab Sample ID:</b>	TD49110-2	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 90.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487793.D	1	12/20/19 16:33	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.05 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00055	0.00038	mg/kg	
108-88-3	Toluene	ND	0.0044	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0044	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0044	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	98%		63-138%
17060-07-0	1,2-Dichloroethane-D4	112%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-8	
<b>Lab Sample ID:</b>	TD49110-2	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 90.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356825.D	1	12/27/19 00:44	ALA	12/20/19 16:50	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	5.47	6.2	3.0	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-8	
<b>Lab Sample ID:</b>	TD49110-2	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 90.4
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002385.D	1	12/22/19 15:58	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.48	5.4	0.47	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.4	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-8	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-2	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	90.4
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	38.9	11	mg/kg	2	12/20/19 22:52	PK	EPA 300.0
Solids, Percent	90.4		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-9	
<b>Lab Sample ID:</b>	TD49110-3	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 92.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487794.D	1	12/20/19 17:00	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.02 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00054	0.00038	mg/kg	
108-88-3	Toluene	ND	0.0043	0.00099	mg/kg	
100-41-4	Ethylbenzene	ND	0.0043	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0043	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	100%		63-138%
17060-07-0	1,2-Dichloroethane-D4	113%		54-123%

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-9	
<b>Lab Sample ID:</b>	TD49110-3	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 92.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356827.D	1	12/27/19 01:06	ALA	12/20/19 16:50	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.0	2.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-9	
<b>Lab Sample ID:</b>	TD49110-3	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 92.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002386.D	1	12/22/19 16:21	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.60	5.3	0.46	mg/kg	J
	TPH-ORO (> C28-C40)	2.31	5.3	0.98	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	58%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-9	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-3	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	92.1
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	50.1	11	mg/kg	2	12/20/19 23:09	PK	EPA 300.0
Solids, Percent	92.1		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-10	
<b>Lab Sample ID:</b>	TD49110-4	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 85.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487795.D	1	12/20/19 17:27	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00058	0.00041	mg/kg	
108-88-3	Toluene	ND	0.0047	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0047	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	110%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-10	
<b>Lab Sample ID:</b>	TD49110-4	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 85.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356829.D	1	12/27/19 01:29	ALA	12/20/19 16:50	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.80 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.9	3.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-10	
<b>Lab Sample ID:</b>	TD49110-4	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 85.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002387.D	1	12/22/19 16:43	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.16	5.8	0.50	mg/kg	J
	TPH-ORO (> C28-C40)	1.70	5.8	1.1	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	59%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-10		
<b>Lab Sample ID:</b>	TD49110-4	<b>Date Sampled:</b>	12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b>	12/19/19
		<b>Percent Solids:</b>	85.6
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	55.6	12	mg/kg	2	12/20/19 23:25	PK	EPA 300.0
Solids, Percent	85.6		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-11	
<b>Lab Sample ID:</b>	TD49110-5	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 84.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487796.D	1	12/20/19 17:54	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.04 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00058	0.00041	mg/kg	
108-88-3	Toluene	ND	0.0047	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0047	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		59-126%
2037-26-5	Toluene-D8	91%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	110%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-11	
<b>Lab Sample ID:</b>	TD49110-5	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 84.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356831.D	1	12/27/19 01:52	ALA	12/20/19 16:50	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	3.33	6.8	3.3	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-11	
<b>Lab Sample ID:</b>	TD49110-5	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 84.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002388.D	1	12/22/19 17:06	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.56	5.9	0.51	mg/kg	J
	TPH-ORO (> C28-C40)	1.46	5.9	1.1	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	59%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-11	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-5	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	84.8
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	101	12	mg/kg	2	12/20/19 23:42	PK	EPA 300.0
Solids, Percent	84.8		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-9	
<b>Lab Sample ID:</b>	TD49110-6	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 95.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487797.D	1	12/20/19 18:21	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.10 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00052	0.00036	mg/kg	
108-88-3	Toluene	ND	0.0041	0.00095	mg/kg	
100-41-4	Ethylbenzene	ND	0.0041	0.0010	mg/kg	
1330-20-7	Xylene (total)	ND	0.0041	0.00096	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	107%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-9	
<b>Lab Sample ID:</b>	TD49110-6	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 95.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356833.D	1	12/27/19 02:14	ALA	12/20/19 16:50	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.6	2.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-9	
<b>Lab Sample ID:</b>	TD49110-6	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 95.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002392.D	1	12/22/19 18:34	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	0.865	5.3	0.45	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.3	0.97	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	53%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-9	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-6	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	95.1
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	616	52	mg/kg	10	12/20/19 23:59	PK	EPA 300.0
Solids, Percent	95.1		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-10	
<b>Lab Sample ID:</b>	TD49110-7	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 85.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487798.D	1	12/20/19 18:48	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.05 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00058	0.00040	mg/kg	
108-88-3	Toluene	ND	0.0046	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0046	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0046	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	110%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-10	
<b>Lab Sample ID:</b>	TD49110-7	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 85.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356849.D	1	12/27/19 05:17	ALA	12/20/19 16:50	n/a	L:GLA2844
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.10 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	4.34	6.6	3.2	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		63-139%
540-36-3	1,4-Difluorobenzene	94%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-10	
<b>Lab Sample ID:</b>	TD49110-7	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 85.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002393.D	1	12/22/19 18:56	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.66	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.7	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	62%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-10	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-7	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.6
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	165	29	mg/kg	5	12/21/19 00:50	PK	EPA 300.0
Solids, Percent	85.6		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-11	
<b>Lab Sample ID:</b>	TD49110-8	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 86.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487799.D	1	12/20/19 19:15	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.01 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00058	0.00040	mg/kg	
108-88-3	Toluene	ND	0.0046	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0046	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0046	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	98%		63-138%
17060-07-0	1,2-Dichloroethane-D4	108%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-11	
<b>Lab Sample ID:</b>	TD49110-8	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 86.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366785.D	1	12/27/19 00:16	ALA	12/20/19 16:50	n/a	L:GLE1951
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.5	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		63-139%
540-36-3	1,4-Difluorobenzene	91%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-11	
<b>Lab Sample ID:</b>	TD49110-8	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 86.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002394.D	1	12/22/19 19:18	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.44	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.7	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	60%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-11	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-8	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	86.7
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	192	29	mg/kg	5	12/21/19 01:07	PK	EPA 300.0
Solids, Percent	86.7		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-12	
<b>Lab Sample ID:</b>	TD49110-9	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 83.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487800.D	1	12/20/19 19:42	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.05 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00059	0.00042	mg/kg	
108-88-3	Toluene	ND	0.0047	0.0011	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.0047	0.0011	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	98%		63-138%
17060-07-0	1,2-Dichloroethane-D4	108%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-12	
<b>Lab Sample ID:</b>	TD49110-9	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 83.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366786.D	1	12/27/19 00:43	ALA	12/20/19 16:50	n/a	L:GLE1951
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	7.1	3.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		63-139%
540-36-3	1,4-Difluorobenzene	92%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-12	
<b>Lab Sample ID:</b>	TD49110-9	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 83.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002395.D	1	12/22/19 19:39	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.49	5.9	0.51	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.9	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	64%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-12	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-9	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	83.5
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	27.7	12	mg/kg	2	12/21/19 01:24	PK	EPA 300.0
Solids, Percent	83.5		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-13	
<b>Lab Sample ID:</b>	TD49110-10	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 77.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487801.D	1	12/20/19 20:10	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.03 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00064	0.00045	mg/kg	
108-88-3	Toluene	ND	0.0051	0.0012	mg/kg	
100-41-4	Ethylbenzene	ND	0.0051	0.0013	mg/kg	
1330-20-7	Xylene (total)	ND	0.0051	0.0012	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	97%		63-138%
17060-07-0	1,2-Dichloroethane-D4	112%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-13	
<b>Lab Sample ID:</b>	TD49110-10	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 77.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366787.D	1	12/27/19 01:11	ALA	12/20/19 16:50	n/a	L:GLE1951
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.20 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	7.6	3.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		63-139%
540-36-3	1,4-Difluorobenzene	93%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-13	
<b>Lab Sample ID:</b>	TD49110-10	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 77.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002396.D	1	12/22/19 20:01	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	2.09	6.4	0.55	mg/kg	J
	TPH-ORO (> C28-C40)	ND	6.4	1.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	63%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-13	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-10	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	77.8
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	26.8	6.3	mg/kg	1	12/21/19 01:41	PK	EPA 300.0
Solids, Percent	77.8		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-14	
<b>Lab Sample ID:</b>	TD49110-11	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 87.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487802.D	1	12/20/19 20:37	SC	12/19/19 14:49	n/a	VR2354
Run #2							

	Initial Weight	Final Volume
Run #1	5.05 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.00056	0.00039	mg/kg	
108-88-3	Toluene	ND	0.0045	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0045	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.0045	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	96%		63-138%
17060-07-0	1,2-Dichloroethane-D4	109%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-14	
<b>Lab Sample ID:</b>	TD49110-11	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 5035	<b>Percent Solids:</b> 87.8
<b>Project:</b>	ETECH:New Mexico	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LE366788.D	1	12/27/19 01:39	ALA	12/20/19 16:50	n/a	L:GLE1951
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.80 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.6	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		63-139%
540-36-3	1,4-Difluorobenzene	92%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-14	
<b>Lab Sample ID:</b>	TD49110-11	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/19/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 87.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002397.D	1	12/22/19 20:22	ALA	12/21/19 10:00	L:OP15909	L:GLG914
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1.50	5.6	0.48	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.6	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	66%		31-127%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
RL = Reporting Limit      B = Indicates analyte found in associated method blank  
E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-14	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49110-11	<b>Date Received:</b>	12/19/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.8
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	29.2	5.6	mg/kg	1	12/21/19 01:58	PK	EPA 300.0
Solids, Percent	87.8		%	1	12/20/19	LC	SM 2540 G

RL = Reporting Limit



Houston, TX

## Section 4

4

### Misc. Forms

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody



SGS

## CHAIN OF CUSTODY

10652

TD49110

PAGE 1 OF 1

10165 Harwin Dr, Ste 150 Houston, TX 77036  
 TEL 713-271-4700 FAX 713-271-4770  
 www.acctest.com

FED-EX Tracking # 493390004692	Order Control # EB-12419-34
Accutest Quote #	Accutest Job # Etech la 14439

Client / Reporting Information		Project Information		Requested Analyses															Matrix Codes	
Company Name <b>ETECH</b>		Project Name <b>Whites City Rd Incident</b>		<div style="display: flex; justify-content: space-around;"> <div>BTEX-8260</div> <div>GRO-8015</div> <div>DRO/ORO-8015</div> <div>Chloride-IC300</div> </div>															DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank	
Street Address <b>3100 Plains Hwy</b>		Street <b>Rural Eddy</b>																		
City State Zip <b>Livingston NM 87240</b>		City State <b>NM</b>																		
Project Contact <b>Soel Lowry</b>		Project #																		
Phone # <b>432-446-4450</b>		YARD CODE:		Billing Information (if different from Report to) Company Name <b>Key Energy</b> Street Address  City State Zip <b>Houston TX</b> Attention <b>APInvoiceProcessing@keyenergy.com</b>																
Sampler(s) Name(s) <b>Soel Lowry</b>		Project Manager <b>Soel Lowry</b>		Number of preserved Bottles HCl NH <sub>4</sub> OH Zn/Al/CH <sub>3</sub> HNO <sub>3</sub> H <sub>2</sub> SO <sub>4</sub> NONE Di Water MEOH TSP NH <sub>4</sub> SO <sub>4</sub> BNC/SIE OTHER																
Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	# of bottles	HCl	NH <sub>4</sub> OH	Zn/Al/CH <sub>3</sub>	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NONE	Di Water	MEOH	TSP	NH <sub>4</sub> SO <sub>4</sub>	BNC/SIE	OTHER	LAB USE ONLY	
1	NW-7	12/16/19	10:00	SL	S	4														
2	NW-8		10:20																	
3	NW-9		10:40																	
4	NW-10		11:00																	
5	NW-11		11:20																	
6	FL-9		11:40																	
7	FL-10		12:00																	
8	FL-11		12:20																	
9	FL-12		12:40																	
10	FL-13		13:00																	
11	FL-14		13:20																	
Turnaround Time (Business days)		Data Deliverable Information																		Comments / Special Instructions
<input type="checkbox"/> Standard <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 4 Day RUSH <input type="checkbox"/> 3 Day RUSH <input checked="" type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day EMERGENCY Emergency & Rush T/A data available VIA Lablink		Approved By (Accutest PM): / Date:		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULT1 (Level 3+4) <input type="checkbox"/> REDT1 (Level 3+4) <input type="checkbox"/> Commercial "C" Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial "C" = Results + QC & Surrogate Summary															<input type="checkbox"/> TRRP <input type="checkbox"/> EDD Format <input type="checkbox"/> Other	KEYENTXH33361
Sample Custody must be documented below each time samples change possession, including courier delivery.																				
Relinquished by Sampler:		Date Time:	Received By:		Relinquished By:		Date Time:		Received By:											
1 Soel Lowry		12/16/19 11:05	1 [Signature]		2 [Signature]		12/16/19		2 [Signature]											
Relinquished by Sampler:		Date Time:	Received By:		Relinquished By:		Date Time:		Received By:											
3			3		4				4											
Relinquished by:		Date Time:	Received By:		Custody Seal #		<input type="checkbox"/> Intact <input type="checkbox"/> Not intact		Preserved where applicable		<input type="checkbox"/> On Ice <input type="checkbox"/> Cooler Temp.									
5			5																	

TD49110: Chain of Custody

Page 1 of 4

SGS

SGS Sample Receipt Summary

Job Number: TD49110

Client: ETECH

Project: WHILES CITY RD INCIDENT

Date / Time Received: 12/19/2019 11:50:00 AM

Delv Method: FEDEX

Airbill #'s: 493390069670

# of Coolers: 1

Therm ID: IR-9;

Temp Adjustment Factor: 0;

Cooler Temps (Initial/Adjusted): #1: (2.8/2.8);

Test Strip Lot #s:

pH 1-12: 10D0391

pH 12+:

Other: (Specify)

Cooler Information

Y

or

N

N/A

1. Custody Seals Present:

☒

☐

☐

2. Custody Seals Intact:

☒

☐

☐

3. Temp criteria achieved:

☒

☐

☐

4. Cooler temp verification:

3. Cooler media: Ice (Bag)

Trip Blank Information

Y

or

N

N/A

1. Trip Blank present / cooler:

☐

☐

☒

2. Trip Blank listed on COC:

☐

☐

☒

3. Type Of TB Received

W

or

S

N/A

☐

☐

☐

Misc. Information

Number of terracores:

Number of Lab Filtered Metals:

Number of 5035 Field Kits:

Residual Chlorine Test Strip Lot #:

Sample Information

Y

or

N

N/A

1. Sample labels present on bottles:

☒

☐

☐

2. Samples preserved properly:

☒

☐

☐

3. Sufficient volume recvd for analysis:

☒

☐

☐

4. Condition of sample: Intact

5. Sample recvd within HT:

☒

☐

☐

6. Dates/Times/IDs on COC match Sample Label

☒

☐

☐

7. Container labeling complete:

☒

☐

☐

8. Analysis requested is clear:

☒

☐

☐

9. VOCs headspace free:

☐

☐

☒

10. Bottles received for unspecified tests

☐

☒

☐

11. COC Present:

☒

☐

☐

12. Special Instructions (compositing/filtering) clear:

☐

☐

☒

13. Voa Soil Kits/Jars received past 48hrs?

☐

☐

☐

14. % Solids Jar received?

☐

☐

☐

15. Residual Chlorine Present?

☐

☐

☐

Comments

4.1  
4

TD49110: Chain of Custody  
Page 2 of 4

SGS

53 of 77  
TD49110

## Sample Receipt Log

Job #: TD49110

Date / Time Received: 12/19/2019 11:50:00 AM

Initials: MAURICIM

Client: ETECH

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD49110-1	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-1	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-1	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-1	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-2	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-2	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-2	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-2	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-3	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-3	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-3	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-3	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-4	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-4	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-4	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-4	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-5	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-5	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-5	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-5	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-6	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-6	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-6	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8

TD49110: Chain of Custody

Page 3 of 4

## Sample Receipt Log

Job #: TD49110

Date / Time Received: 12/19/2019 11:50:00 AM

Initials: MAURICIM

Client: ETECH

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD49110-6	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-7	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-7	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-7	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-7	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-8	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-8	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-8	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-8	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-9	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-9	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-9	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-9	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-10	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-10	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-10	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-10	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-11	8oz	1	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-11	4oz	2	SUB	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-11	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8
1	TD49110-11	4oz	4	2-105	N/P	Note #2 - Preservative check not applicable.	IR-9	2.8	0	2.8

TD49110: Chain of Custody

Page 4 of 4



Houston, TX

## Section 5

### MS Volatiles

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD49110  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR2354-MB	R03487781.D	1	12/20/19	SC	n/a	n/a	VR2354

The QC reported here applies to the following samples:

Method: SW846 8260C

TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.35	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	1.0	ug/kg	
108-88-3	Toluene	ND	4.0	0.92	ug/kg	
1330-20-7	Xylene (total)	ND	4.0	0.93	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	104% 59-126%
2037-26-5	Toluene-D8	91% 70-139%
460-00-4	4-Bromofluorobenzene	96% 63-138%
17060-07-0	1,2-Dichloroethane-D4	102% 54-123%

Blank Spike Summary

Job Number: TD49110  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR2354-BS	R03487779.D	1	12/20/19	SC	n/a	n/a	VR2354

The QC reported here applies to the following samples: Method: SW846 8260C

TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	37.4	75	58-124
100-41-4	Ethylbenzene	50	35.5	71	57-124
108-88-3	Toluene	50	35.6	71	67-119
1330-20-7	Xylene (total)	150	108	72	62-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	109%	59-126%
2037-26-5	Toluene-D8	92%	70-139%
460-00-4	4-Bromofluorobenzene	99%	63-138%
17060-07-0	1,2-Dichloroethane-D4	102%	54-123%

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TD49110  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD48974-2MS	R03487784.D	200	12/20/19	SC	n/a	n/a	VR2354
TD48974-2MSD	R03487785.D	200	12/20/19	SC	n/a	n/a	VR2354
TD48974-2	R03487782.D	200	12/20/19	SC	n/a	n/a	VR2354

The QC reported here applies to the following samples: Method: SW846 8260C

TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11

CAS No.	Compound	TD48974-2 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	8000 U	801000	671000	84	801000	644000	80	4	58-124/26
100-41-4	Ethylbenzene	64000 U	801000	644000	80	801000	621000	78	4	57-124/29
108-88-3	Toluene	64000 U	801000	640000	80	801000	617000	77	4	67-119/28
1330-20-7	Xylene (total)	64000 U	2400000	1950000	81	2400000	1900000	79	3	62-120/27

CAS No.	Surrogate Recoveries	MS	MSD	TD48974-2	Limits
1868-53-7	Dibromofluoromethane	104%	107%	104%	59-126%
2037-26-5	Toluene-D8	91%	92%	92%	70-139%
460-00-4	4-Bromofluorobenzene	99%	98%	96%	63-138%
17060-07-0	1,2-Dichloroethane-D4	100%	99%	101%	54-123%

\* = Outside of Control Limits.





Houston, TX

## Section 6

### General Chemistry

#### QC Data Summaries

---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD49110  
Account: KEYENTXH - Key Energy  
Project: ETECH:New Mexico

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP56112/GN3344	5.0	0.0	mg/kg	100	94.6	94.6	90-110%

Associated Samples:  
Batch GP56112: TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11  
(\*) Outside of QC limits

6.1  
6

DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD49110  
Account: KEYENTXH - Key Energy  
Project: ETECH:New Mexico

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP56112/GN3344	TD49110-1	mg/kg	502	509	1.4	0-20%

Associated Samples:  
Batch GN3289: TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11  
Batch GP56112: TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11  
(\*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD49110  
Account: KEYENTXH - Key Energy  
Project: ETECH:New Mexico

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP56112/GN3344	TD49110-1	mg/kg	502	1140	620	10.4N	80-120%

Associated Samples:  
Batch GP56112: TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11  
(\*) Outside of QC limits  
(N) Matrix Spike Rec. outside of QC limits

63  
6



Houston, TX

## Section 7

### Misc. Forms

### Custody Documents and Other Forms

(SGS Scott, LA)

---

Includes the following where applicable:

- Chain of Custody



## CHAIN OF CUSTODY

Page 1 of 1

Client / Reporting Information		Project Information		Requested Analysis ( see TEST CODE sheet)												Matrix Codes					
Company Name: <b>SGS North America Inc.</b>		Project Name: <b>ETECH:New Mexico</b>		<div style="display: flex; justify-content: space-between;"> <span>B8015DRO BGC-ORO .V8035SPM .V8015GRO</span> <span>LAB USE ONLY</span> </div>												DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank					
Street Address <b>10165 Harwin Drive</b>		Street																			
City State Zip <b>Houston TX 77036</b>		City State																			
Project Contact <b>electa.brown@sgs.com</b>		Project #																			
Phone # <b>713-271-4700</b>		Fax #																			
Sampler(s) Name(s)		Phone		Client Purchase Order #		City State Zip		Attention:													
SGS Sample #		Field ID / Point of Collection		MEOH/DI Vial #		Collection		Number of preserved Bottles													
1		NW-7		12/16/19		10:00:00 AM		SO 2		X											
2		NW-8		12/16/19		10:20:00 AM		SO 2		X											
3		NW-9		12/16/19		10:40:00 AM		SO 2		X											
4		NW-10		12/16/19		11:00:00 AM		SO 2		X											
5		NW-11		12/16/19		11:20:00 AM		SO 2		X											
6		FL-9		12/16/19		11:40:00 AM		SO 2		X											
7		FL-10		12/16/19		12:00:00 PM		SO 2		X											
8		FL-11		12/16/19		12:00:00 PM		SO 2		X											
9		FL-12		12/16/19		12:40:00 PM		SO 2		X											
10		FL-13		12/16/19		1:00:00 PM		SO 2		X											
11		FL-14		12/16/19		1:20:00 PM		SO 2		X											
Turnaround Time ( Business days)										Data Deliverable Information											
<input type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input checked="" type="checkbox"/> other Due 12/23/2019 Emergency & Rush T/A data available VIA Lablink		Approved By (SGS PM): / Date: _____ _____ _____ _____ _____		<input type="checkbox"/> Commercial "A" ( Level 1) <input type="checkbox"/> Commercial "B" ( Level 2) <input type="checkbox"/> FULLT1 ( Level 3+4) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" Commercial "A" = Results Only Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data		<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input checked="" type="checkbox"/> Other COMMB		LA 12-20-19 08:00 AM <b>RUSH!</b> BXL-99 B4 BSM-4 (7) (VS)													
Sample Custody must be documented below each time samples change possession, including courier delivery.																					
Relinquished by: <i>[Signature]</i>		Date Time: 12/19/19 1800		Received By: <i>[Signature]</i>		Date Time: 12-19-19		Relinquished By: <i>[Signature]</i>		Date Time: 12-19-19		Received By: <i>[Signature]</i>									
Relinquished by: <i>[Signature]</i>		Date Time: 12-19-19		Received By: <i>[Signature]</i>		Date Time: 12-19-19		Relinquished By: <i>[Signature]</i>		Date Time: 12-19-19		Received By: <i>[Signature]</i>									
Relinquished by: <i>[Signature]</i>		Date Time: 12-19-19		Received By: <i>[Signature]</i>		Date Time: 12-19-19		Relinquished By: <i>[Signature]</i>		Date Time: 12-19-19		Received By: <i>[Signature]</i>									
Custody Seal # <i>[Signature]</i>		Intact <input checked="" type="checkbox"/> Not intact <input type="checkbox"/>		Preserved where applicable <input checked="" type="checkbox"/>		On Ice <input checked="" type="checkbox"/>		Cooler Temp: 1.6 10/4/39													

TD49110: Chain of Custody

Page 1 of 2

SGS Scott, LA

SGS Sample Receipt Summary

Job Number: TD49110

Client: SGS NORTH AMERICA

Project: NEW MEXICO

Date / Time Received: 12/20/2019 8:00:00 AM

Delivery Method: Accutest Courier

Airbill #s:

Cooler Temps (Initial/Adjusted): #1: (1.6/1.6); #1: (1.6/1.6);

Cooler Security

Y or N

Y or N

1. Custody Seals Present:

☐ ☒

3. COC Present:

☒ ☐

2. Custody Seals Intact:

☐ ☒

4. Smpl Dates/Time OK

☒ ☐

Cooler Temperature

Y or N

1. Temp criteria achieved:

☒ ☐

2. Thermometer ID:

DV439; DV439;

3. Cooler media:

Ice (direct contact)

4. No. Coolers:

1

Quality Control Preservation

Y or N

N/A

1. Trip Blank present / cooler:

☐ ☐ ☒

2. Trip Blank listed on COC:

☐ ☐ ☒

3. Samples preserved properly:

☒ ☐

4. VOCs headspace free:

☐ ☐ ☒

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles:

☒ ☐

2. Container labeling complete:

☒ ☐

3. Sample container label / COC agree:

☒ ☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT:

☒ ☐

2. All containers accounted for:

☒ ☐

3. Condition of sample:

Intact

Sample Integrity - Instructions

Y or N

N/A

1. Analysis requested is clear:

☒ ☐

2. Bottles received for unspecified tests

☐ ☒

3. Sufficient volume recvd for analysis:

☒ ☐

4. Compositing instructions clear:

☐ ☐ ☒

5. Filtering instructions clear:

☐ ☐ ☒

Comments



Houston, TX

## Section 8

### GC Volatiles

### QC Data Summaries

(SGS Scott, LA)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



Method Blank Summary

Page 1 of 1

Job Number: TD49110

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLA2844-MB1	LA356761.D	1	12/26/19	NN	n/a	n/a	GLA2844

The QC reported here applies to the following samples:

Method: SW846 8015C

TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	2.75	5.0	2.4	mg/kg	J

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 63-139%
540-36-3	1,4-Difluorobenzene	98% 52-140%

8.1.1

8

Method Blank Summary

Page 1 of 1

Job Number: TD49110

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLE1951-MB1	LE366772.D	1	12/26/19	NN	n/a	n/a	GLE1951

The QC reported here applies to the following samples:Method: SW846 8015C

TD49110-8, TD49110-9, TD49110-10, TD49110-11

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	3.78	5.0	2.4	mg/kg	J

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	92%63-139%
540-36-3	1,4-Difluorobenzene	92%52-140%

8.1.2

8

**Blank Spike/Blank Spike Duplicate Summary**

Page 1 of 1

**Job Number:** TD49110  
**Account:** ALGC SGS Houston, TX  
**Project:** KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLA2844-BS2	LA356807.D	1	12/26/19	NN	n/a	n/a	GLA2844
GLA2844-BSD2	LA356809.D	1	12/26/19	NN	n/a	n/a	GLA2844

The QC reported here applies to the following samples:

Method: SW846 8015C

TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	50	46.9	94	46.2	92	2	79-121/6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	96%	63-139%
540-36-3	1,4-Difluorobenzene	98%	98%	52-140%

\* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD49110  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLE1951-BS1	LE366782.D	1	12/26/19	NN	n/a	n/a	GLE1951
GLE1951-BSD1	LE366783.D	1	12/26/19	NN	n/a	n/a	GLE1951

The QC reported here applies to the following samples: Method: SW846 8015C

TD49110-8, TD49110-9, TD49110-10, TD49110-11

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	50	44.5	89	44.2	88	1	79-121/6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	99%	63-139%
540-36-3	1,4-Difluorobenzene	99%	97%	52-140%

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TD49110

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA60258-19MS	LE366789.D	1	12/27/19	NN	n/a	n/a	GLE1951
LA60258-19MSD	LE366790.D	1	12/27/19	NN	n/a	n/a	GLE1951
LA60258-19	LE366793.D	1	12/27/19	NN	n/a	n/a	GLE1951

The QC reported here applies to the following samples:

Method: SW846 8015C

TD49110-8, TD49110-9, TD49110-10, TD49110-11

CAS No.	Compound	LA60258-19 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		96.2	83.0	86	96.2	82.4	86	1	79-121/6

CAS No.	Surrogate Recoveries	MS	MSD	LA60258-19	Limits
460-00-4	4-Bromofluorobenzene	103%	102%	91%	63-139%
540-36-3	1,4-Difluorobenzene	99%	98%	92%	52-140%

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TD49110

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

	Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
(a)	TD49110-4MS	LA356949.D	1	12/28/19	NN	n/a	n/a	GLA2844
(a)	TD49110-4MSD	LA356951.D	1	12/28/19	NN	n/a	n/a	GLA2844
	TD49110-4	LA356829.D	1	12/27/19	NN	n/a	n/a	GLA2844

The QC reported here applies to the following samples:

Method: SW846 8015C

TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7

CAS No.	Compound	TD49110-4 mg/kg	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	693	587	85	693	600	87	2	79-121/6

CAS No.	Surrogate Recoveries	MS	MSD	TD49110-4	Limits
460-00-4	4-Bromofluorobenzene	98%	99%	97%	63-139%
540-36-3	1,4-Difluorobenzene	100%	99%	95%	52-140%

(a) SAMPLE NOT YET APPROVED BY LAB. DO NOT REPORT.

\* = Outside of Control Limits.



Houston, TX

## Section 9

### GC/LC Semi-volatiles

#### QC Data Summaries

(SGS Scott, LA)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number:

TD49110

Account:

ALGC SGS Houston, TX

Project:

KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15909-MB	LG002379.D	1	12/22/19	PC	12/21/19	OP15909	GLG914

The QC reported here applies to the following samples:

Method: SW846 8015C

TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	5.0	0.43	mg/kg	
	TPH-ORO (> C28-C40)	ND	5.0	0.92	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	66% 31-127%

9.1.1

9



Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD49110  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15909-BS1	LG002380.D	1	12/22/19	PC	12/21/19	OP15909	GLG914
OP15909-BSD1	LG002381.D	1	12/22/19	PC	12/21/19	OP15909	GLG914

The QC reported here applies to the following samples: Method: SW846 8015C

TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	149	110	74	117	78	6	49-118/19

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	70%	73%	31-127%

\* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD49110  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15909-BS2	LG002382.D	1	12/22/19	PC	12/21/19	OP15909	GLG914
OP15909-BSD2	LG002383.D	1	12/22/19	PC	12/21/19	OP15909	GLG914

The QC reported here applies to the following samples: Method: SW846 8015C

TD49110-1, TD49110-2, TD49110-3, TD49110-4, TD49110-5, TD49110-6, TD49110-7, TD49110-8, TD49110-9, TD49110-10, TD49110-11

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-ORO (> C28-C40)	59.7	53.2	89	56.2	94	5	60-127/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	69%	73%	31-127%

\* = Outside of Control Limits.



Houston, TX

01/02/20

The results set forth herein are provided by SGS North America Inc.

**e-Hardcopy 2.0**  
Automated Report**Technical Report for****Key Energy**

ETECH:New Mexico

Whites City Rd.

SGS Job Number: TD49314

Sampling Dates: 12/16/19 - 12/17/19

**Report to:**

Key Energy  
1301 McKinney Street  
Houston, TX 77010  
msticker@keyenergy.com; jbest@keyenergy.com

ATTN: Maury Sticker

Total number of pages in report: **92**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

John Watson  
Technical Director

**Client Service contact: Electa Brown 713-271-4700**

Certifications: TX (T104704220-19-34) AR (14-016-0) AZ (AZ0769) FL (E87628)  
KS (E-10366) LA (85695/04004) NJ (TX010) OK (2018-129) VA (10171)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.  
Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>4</b>
<b>Section 2: Summary of Hits .....</b>	<b>7</b>
<b>Section 3: Sample Results .....</b>	<b>10</b>
<b>3.1:</b> TD49314-1: FL-16 .....	11
<b>3.2:</b> TD49314-1A: FL-16 .....	13
<b>3.3:</b> TD49314-2: FL-17 .....	15
<b>3.4:</b> TD49314-2A: FL-17 .....	17
<b>3.5:</b> TD49314-3: SW-2 .....	19
<b>3.6:</b> TD49314-3A: SW-2 .....	21
<b>3.7:</b> TD49314-4: SW-3 .....	23
<b>3.8:</b> TD49314-4A: SW-3 .....	25
<b>3.9:</b> TD49314-5: SW-7 .....	27
<b>3.10:</b> TD49314-5A: SW-7 .....	29
<b>3.11:</b> TD49314-6: SW-4 .....	31
<b>3.12:</b> TD49314-6A: SW-4 .....	33
<b>3.13:</b> TD49314-7: SW-10 .....	35
<b>3.14:</b> TD49314-7A: SW-10 .....	37
<b>3.15:</b> TD49314-8: SW-9 .....	39
<b>3.16:</b> TD49314-8A: SW-9 .....	41
<b>3.17:</b> TD49314-9: SW-8 .....	43
<b>3.18:</b> TD49314-9A: SW-8 .....	45
<b>3.19:</b> TD49314-10: FL-18 .....	47
<b>3.20:</b> TD49314-10A: FL-18 .....	49
<b>3.21:</b> TD49314-11: FL-19 .....	51
<b>3.22:</b> TD49314-11A: FL-19 .....	53
<b>3.23:</b> TD49314-12: EW .....	55
<b>3.24:</b> TD49314-12A: EW .....	57
<b>3.25:</b> TD49314-13: FL-15 .....	59
<b>3.26:</b> TD49314-13A: FL-15 .....	61
<b>Section 4: Misc. Forms .....</b>	<b>63</b>
<b>4.1:</b> Chain of Custody .....	64
<b>Section 5: MS Volatiles - QC Data Summaries .....</b>	<b>70</b>
<b>5.1:</b> Method Blank Summary .....	71
<b>5.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	72
<b>Section 6: General Chemistry - QC Data Summaries .....</b>	<b>73</b>
<b>6.1:</b> Method Blank and Spike Results Summary .....	74
<b>6.2:</b> Duplicate Results Summary .....	75
<b>6.3:</b> Matrix Spike Results Summary .....	76
<b>Section 7: Misc. Forms (SGS Scott, LA) .....</b>	<b>77</b>
<b>7.1:</b> Chain of Custody .....	78
<b>Section 8: GC Volatiles - QC Data (SGS Scott, LA) .....</b>	<b>82</b>
<b>8.1:</b> Method Blank Summary .....	83

# Table of Contents

Sections:

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

-2-

8.2: Blank Spike/Blank Spike Duplicate Summary .....	85
8.3: Matrix Spike/Matrix Spike Duplicate Summary .....	87
Section 9: GC/LC Semi-volatiles - QC Data (SGS Scott, LA) .....	89
9.1: Method Blank Summary .....	90
9.2: Blank Spike/Blank Spike Duplicate Summary .....	91



SGS North America Inc.

## Sample Summary

Key Energy

Job No: TD49314

ETECH:New Mexico  
Project No: Whites City Rd.

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
---------------	----------------	---------	----------	-------------	------	------------------

This report contains results reported as ND = Not detected. The following applies:

Organics ND = Not detected above the MDL

TD49314-1	12/16/19	02:20	12/24/19	SO	Soil	FL-16
TD49314-1A	12/16/19	02:20	12/24/19	SO	Soil	FL-16
TD49314-2	12/16/19	02:30	12/24/19	SO	Soil	FL-17
TD49314-2A	12/16/19	02:30	12/24/19	SO	Soil	FL-17
TD49314-3	12/17/19	10:00	12/24/19	SO	Soil	SW-2
TD49314-3A	12/17/19	10:00	12/24/19	SO	Soil	SW-2
TD49314-4	12/17/19	10:15	12/24/19	SO	Soil	SW-3
TD49314-4A	12/17/19	10:15	12/24/19	SO	Soil	SW-3
TD49314-5	12/17/19	10:45	12/24/19	SO	Soil	SW-7
TD49314-5A	12/17/19	10:45	12/24/19	SO	Soil	SW-7
TD49314-6	12/17/19	11:15	12/24/19	SO	Soil	SW-4
TD49314-6A	12/17/19	11:15	12/24/19	SO	Soil	SW-4

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



SGS North America Inc.

## Sample Summary

(continued)

Key Energy

Job No: TD49314

ETECH:New Mexico  
Project No: Whites City Rd.

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
TD49314-7	12/17/19	11:30	12/24/19	SO	Soil	SW-10
TD49314-7A	12/17/19	11:30	12/24/19	SO	Soil	SW-10
TD49314-8	12/17/19	10:30	12/24/19	SO	Soil	SW-9
TD49314-8A	12/17/19	10:30	12/24/19	SO	Soil	SW-9
TD49314-9	12/17/19	11:00	12/24/19	SO	Soil	SW-8
TD49314-9A	12/17/19	11:00	12/24/19	SO	Soil	SW-8
TD49314-10	12/17/19	11:45	12/24/19	SO	Soil	FL-18
TD49314-10A	12/17/19	11:45	12/24/19	SO	Soil	FL-18
TD49314-11	12/17/19	12:00	12/24/19	SO	Soil	FL-19
TD49314-11A	12/17/19	12:00	12/24/19	SO	Soil	FL-19
TD49314-12	12/17/19	12:30	12/24/19	SO	Soil	EW
TD49314-12A	12/17/19	12:30	12/24/19	SO	Soil	EW
TD49314-13	12/16/19	13:40	12/24/19	SO	Soil	FL-15

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



SGS North America Inc.

Sample Summary  
(continued)

Key Energy

Job No: TD49314

ETECH:New Mexico  
Project No: Whites City Rd.

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
TD49314-13A	12/16/19	13:40	12/24/19	SO	Soil	FL-15

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



**Summary of Hits**

Page 1 of 3

**Job Number:** TD49314  
**Account:** Key Energy  
**Project:** ETECH:New Mexico  
**Collected:** 12/16/19 thru 12/17/19

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>TD49314-1</b>	<b>FL-16</b>					
Chloride		299	58		mg/kg	EPA 300.0
<b>TD49314-1A</b>	<b>FL-16</b>					
TPH-DRO (C10-C28) <sup>a</sup>		0.979 J	5.7	0.50	mg/kg	SW846 8015C
<b>TD49314-2</b>	<b>FL-17</b>					
Chloride		374	57		mg/kg	EPA 300.0
<b>TD49314-2A</b>	<b>FL-17</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.18 J	5.8	0.50	mg/kg	SW846 8015C
<b>TD49314-3</b>	<b>SW-2</b>					
Chloride		18.8	11		mg/kg	EPA 300.0
<b>TD49314-3A</b>	<b>SW-2</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.16 J	5.7	0.50	mg/kg	SW846 8015C
<b>TD49314-4</b>	<b>SW-3</b>					
Chloride		13.6	13		mg/kg	EPA 300.0
<b>TD49314-4A</b>	<b>SW-3</b>					
TPH-DRO (C10-C28) <sup>a</sup>		2.61 J	6.5	0.56	mg/kg	SW846 8015C
TPH-ORO (> C28-C40) <sup>b</sup>		9.92	6.5	1.2	mg/kg	SW846 8015C
<b>TD49314-5</b>	<b>SW-7</b>					
Chloride		47.3	11		mg/kg	EPA 300.0
<b>TD49314-5A</b>	<b>SW-7</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.78 J	5.7	0.49	mg/kg	SW846 8015C
<b>TD49314-6</b>	<b>SW-4</b>					
Chloride		23.1	11		mg/kg	EPA 300.0

**Summary of Hits**

Page 2 of 3

**Job Number:** TD49314  
**Account:** Key Energy  
**Project:** ETECH:New Mexico  
**Collected:** 12/16/19 thru 12/17/19

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>TD49314-6A</b>	<b>SW-4</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.08 J	5.8	0.50	mg/kg	SW846 8015C
<b>TD49314-7</b>	<b>SW-10</b>					
Chloride		14.7	13		mg/kg	EPA 300.0
<b>TD49314-7A</b>	<b>SW-10</b>					
TPH-GRO (C6-C10) <sup>b</sup>		6.10 J	8.5	4.2	mg/kg	SW846 8015C
TPH-DRO (C10-C28) <sup>a</sup>		1.11 J	6.5	0.56	mg/kg	SW846 8015C
<b>TD49314-8</b>	<b>SW-9</b>					
Chloride		18.6	11		mg/kg	EPA 300.0
<b>TD49314-8A</b>	<b>SW-9</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.66 J	5.6	0.48	mg/kg	SW846 8015C
<b>TD49314-9</b>	<b>SW-8</b>					
Chloride		564	68		mg/kg	EPA 300.0
<b>TD49314-9A</b>	<b>SW-8</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.22 J	6.8	0.58	mg/kg	SW846 8015C
<b>TD49314-10</b>	<b>FL-18</b>					
Chloride		298	57		mg/kg	EPA 300.0
<b>TD49314-10A</b>	<b>FL-18</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.21 J	5.7	0.49	mg/kg	SW846 8015C
<b>TD49314-11</b>	<b>FL-19</b>					
Chloride		156	28		mg/kg	EPA 300.0
<b>TD49314-11A</b>	<b>FL-19</b>					
TPH-DRO (C10-C28) <sup>a</sup>		1.40 J	5.7	0.49	mg/kg	SW846 8015C

**Summary of Hits**

Page 3 of 3

**Job Number:** TD49314  
**Account:** Key Energy  
**Project:** ETECH:New Mexico  
**Collected:** 12/16/19 thru 12/17/19

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>TD49314-12</b>	<b>EW</b>					
Chloride		38.8	12		mg/kg	EPA 300.0
<b>TD49314-12A</b>	<b>EW</b>					
TPH-DRO (C10-C28) <sup>a</sup>		3.58 J	5.9	0.51	mg/kg	SW846 8015C
<b>TD49314-13</b>	<b>FL-15</b>					
Chloride		170	28		mg/kg	EPA 300.0
<b>TD49314-13A</b>	<b>FL-15</b>					
TPH-DRO (C10-C28) <sup>a</sup>		2.21 J	5.7	0.49	mg/kg	SW846 8015C
TPH-ORO (> C28-C40) <sup>a</sup>		1.11 J	5.7	1.1	mg/kg	SW846 8015C

(a) Analysis performed at SGS Scott, LA. Associated CCV outside of control limits high.

(b) Analysis performed at SGS Scott, LA.



Houston, TX

Section 3



## Sample Results

## Report of Analysis

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-16	
<b>Lab Sample ID:</b>	TD49314-1	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 85.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487837.D	5	12/24/19 15:46	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.01 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0029	0.0020	mg/kg	
108-88-3	Toluene	ND	0.023	0.0053	mg/kg	
100-41-4	Ethylbenzene	ND	0.023	0.0059	mg/kg	
1330-20-7	Xylene (total)	ND	0.023	0.0054	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	93%		63-138%
17060-07-0	1,2-Dichloroethane-D4	95%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-16	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49314-1	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.7
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	299	58	mg/kg	10	12/26/19 23:34	PK	EPA 300.0
Solids, Percent	85.7		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-16	
<b>Lab Sample ID:</b>	TD49314-1A	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 85.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356963.D	1	12/28/19 03:10	ALA	n/a	n/a	L:GLA2846
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.10 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.6	3.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
460-00-4	4-Bromofluorobenzene	96%		63-139%		
540-36-3	1,4-Difluorobenzene	94%		52-140%		

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-16	
<b>Lab Sample ID:</b>	TD49314-1A	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 85.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002601.D	1	12/31/19 06:20	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	0.979	5.7	0.50	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.7	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	73%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-17	
<b>Lab Sample ID:</b>	TD49314-2	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 86.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487838.D	5	12/24/19 16:13	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.02 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0029	0.0020	mg/kg	
108-88-3	Toluene	ND	0.023	0.0053	mg/kg	
100-41-4	Ethylbenzene	ND	0.023	0.0058	mg/kg	
1330-20-7	Xylene (total)	ND	0.023	0.0054	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	94%		63-138%
17060-07-0	1,2-Dichloroethane-D4	98%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-17	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49314-2	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	86.1
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	374	57	mg/kg	10	12/27/19 00:24	PK	EPA 300.0
Solids, Percent	86.1		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-17	
<b>Lab Sample ID:</b>	TD49314-2A	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 86.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356965.D	1	12/28/19 03:33	ALA	n/a	n/a	L:GLA2846
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.7	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-17	
<b>Lab Sample ID:</b>	TD49314-2A	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 86.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002602.D	1	12/31/19 06:41	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	1.18	5.8	0.50	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.8	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	55%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-2						
<b>Lab Sample ID:</b>	TD49314-3					<b>Date Sampled:</b>	12/17/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	87.1
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487839.D	5	12/24/19 16:40	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.05 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0028	0.0020	mg/kg	
108-88-3	Toluene	ND	0.023	0.0052	mg/kg	
100-41-4	Ethylbenzene	ND	0.023	0.0057	mg/kg	
1330-20-7	Xylene (total)	ND	0.023	0.0053	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	94%		63-138%
17060-07-0	1,2-Dichloroethane-D4	97%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-2	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-3	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.1
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	18.8	11	mg/kg	2	12/27/19 00:41	PK	EPA 300.0
Solids, Percent	87.1		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-2	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-3A	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.1
<b>Method:</b>	SW846 8015C		
<b>Project:</b>	ETECH:New Mexico		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356969.D	1	12/28/19 04:19	ALA	n/a	n/a	L:GLA2846
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.6	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		63-139%
540-36-3	1,4-Difluorobenzene	100%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-2	
<b>Lab Sample ID:</b>	TD49314-3A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 87.1
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002603.D	1	12/31/19 07:02	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	1.16	5.7	0.50	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.7	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-3						
<b>Lab Sample ID:</b>	TD49314-4					<b>Date Sampled:</b>	12/17/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	74.9
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487840.D	5	12/24/19 17:08	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.09 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0033	0.0023	mg/kg	
108-88-3	Toluene	ND	0.026	0.0060	mg/kg	
100-41-4	Ethylbenzene	ND	0.026	0.0066	mg/kg	
1330-20-7	Xylene (total)	ND	0.026	0.0061	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	93%		63-138%
17060-07-0	1,2-Dichloroethane-D4	95%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-3	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-4	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	74.9
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	13.6	13	mg/kg	2	12/27/19 00:58	PK	EPA 300.0
Solids, Percent	74.9		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-3	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-4A	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	74.9
<b>Method:</b>	SW846 8015C		
<b>Project:</b>	ETECH:New Mexico		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356971.D	1	12/28/19 04:41	ALA	n/a	n/a	L:GLA2846
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.10 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	8.2	4.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-3	
<b>Lab Sample ID:</b>	TD49314-4A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 74.9
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002604.D	1	12/31/19 07:23	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	2.61	6.5	0.56	mg/kg	J
	TPH-ORO (> C28-C40)	9.92	6.5	1.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	57%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-7						
<b>Lab Sample ID:</b>	TD49314-5					<b>Date Sampled:</b>	12/17/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	86.7
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487841.D	5	12/24/19 17:35	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.06 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0028	0.0020	mg/kg	
108-88-3	Toluene	ND	0.023	0.0052	mg/kg	
100-41-4	Ethylbenzene	ND	0.023	0.0058	mg/kg	
1330-20-7	Xylene (total)	ND	0.023	0.0053	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	96%		63-138%
17060-07-0	1,2-Dichloroethane-D4	96%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-7	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-5	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	86.7
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	47.3	11	mg/kg	2	12/27/19 01:49	PK	EPA 300.0
Solids, Percent	86.7		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-7	
<b>Lab Sample ID:</b>	TD49314-5A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 86.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356973.D	1	12/28/19 05:05	ALA	n/a	n/a	L:GLA2846
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.10 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.4	3.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-7	
<b>Lab Sample ID:</b>	TD49314-5A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 86.7
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002605.D	1	12/31/19 07:44	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	1.78	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40)	ND	5.7	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	65%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-4							
<b>Lab Sample ID:</b>	TD49314-6					<b>Date Sampled:</b>	12/17/19	
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19	
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	85.8	
<b>Project:</b>	ETECH:New Mexico							

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487842.D	5	12/24/19 18:02	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.08 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0029	0.0020	mg/kg	
108-88-3	Toluene	ND	0.023	0.0053	mg/kg	
100-41-4	Ethylbenzene	ND	0.023	0.0058	mg/kg	
1330-20-7	Xylene (total)	ND	0.023	0.0053	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	93%		63-138%
17060-07-0	1,2-Dichloroethane-D4	95%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-4	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-6	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.8
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	23.1	11	mg/kg	2	12/27/19 02:06	PK	EPA 300.0
Solids, Percent	85.8		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-4	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-6A	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	85.8
<b>Method:</b>	SW846 8015C		
<b>Project:</b>	ETECH:New Mexico		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356975.D	1	12/28/19 05:27	ALA	n/a	n/a	L:GLA2846
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.7	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		63-139%
540-36-3	1,4-Difluorobenzene	99%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-4	
<b>Lab Sample ID:</b>	TD49314-6A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 85.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002609.D	1	12/31/19 09:08	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	1.08	5.8	0.50	mg/kg	J
	TPH-ORO (> C28-C40) <sup>c</sup>	ND	5.8	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	71%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-10	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-7	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	74.8
<b>Method:</b>	SW846 8260C SW846 5030A		
<b>Project:</b>	ETECH:New Mexico		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487843.D	5	12/24/19 18:29	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.07 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0033	0.0023	mg/kg	
108-88-3	Toluene	ND	0.026	0.0061	mg/kg	
100-41-4	Ethylbenzene	ND	0.026	0.0067	mg/kg	
1330-20-7	Xylene (total)	ND	0.026	0.0061	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	93%		63-138%
17060-07-0	1,2-Dichloroethane-D4	99%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-10	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-7	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	74.8
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	14.7	13	mg/kg	2	12/27/19 02:23	PK	EPA 300.0
Solids, Percent	74.8		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-10	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-7A	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	74.8
<b>Method:</b>	SW846 8015C		
<b>Project:</b>	ETECH:New Mexico		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LC081074.D	1	12/27/19 12:42	ALA	n/a	n/a	L:GLC2577
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	6.10	8.5	4.2	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		63-139%
540-36-3	1,4-Difluorobenzene	102%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-10	
<b>Lab Sample ID:</b>	TD49314-7A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 74.8
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002610.D	1	12/31/19 09:29	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	1.11	6.5	0.56	mg/kg	J
	TPH-ORO (> C28-C40) <sup>c</sup>	ND	6.5	1.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	71%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-9							
<b>Lab Sample ID:</b>	TD49314-8					<b>Date Sampled:</b>	12/17/19	
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19	
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	87.3	
<b>Project:</b>	ETECH:New Mexico							

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487844.D	5	12/24/19 18:56	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.04 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0028	0.0020	mg/kg	
108-88-3	Toluene	ND	0.023	0.0052	mg/kg	
100-41-4	Ethylbenzene	ND	0.023	0.0057	mg/kg	
1330-20-7	Xylene (total)	ND	0.023	0.0053	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	95%		63-138%
17060-07-0	1,2-Dichloroethane-D4	98%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-9	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-8	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.3
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	18.6	11	mg/kg	2	12/27/19 02:40	PK	EPA 300.0
Solids, Percent	87.3		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-9						
<b>Lab Sample ID:</b>	TD49314-8A					<b>Date Sampled:</b>	12/17/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19
<b>Method:</b>	SW846 8015C					<b>Percent Solids:</b>	87.3
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356983.D	1	12/28/19 06:59	ALA	n/a	n/a	L:GLA2846
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.5	3.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-9						
<b>Lab Sample ID:</b>	TD49314-8A					<b>Date Sampled:</b>	12/17/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19
<b>Method:</b>	SW846 8015C SW846 3546					<b>Percent Solids:</b>	87.3
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002611.D	1	12/31/19 09:50	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	1.66	5.6	0.48	mg/kg	J
	TPH-ORO (> C28-C40) <sup>c</sup>	ND	5.6	1.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	49%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-8							
<b>Lab Sample ID:</b>	TD49314-9					<b>Date Sampled:</b>	12/17/19	
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19	
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	73.3	
<b>Project:</b>	ETECH:New Mexico							

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487845.D	5	12/24/19 19:24	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.00 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0034	0.0024	mg/kg	
108-88-3	Toluene	ND	0.027	0.0063	mg/kg	
100-41-4	Ethylbenzene	ND	0.027	0.0069	mg/kg	
1330-20-7	Xylene (total)	ND	0.027	0.0063	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		59-126%
2037-26-5	Toluene-D8	90%		70-139%
460-00-4	4-Bromofluorobenzene	95%		63-138%
17060-07-0	1,2-Dichloroethane-D4	95%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-8	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-9	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	73.3
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	564	68	mg/kg	10	12/27/19 02:57	PK	EPA 300.0
Solids, Percent	73.3		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-8	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-9A	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	73.3
<b>Method:</b>	SW846 8015C		
<b>Project:</b>	ETECH:New Mexico		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356985.D	1	12/28/19 07:21	ALA	n/a	n/a	L:GLA2846
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	8.6	4.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-8	
<b>Lab Sample ID:</b>	TD49314-9A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 73.3
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002612.D	1	12/31/19 10:11	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	1.22	6.8	0.58	mg/kg	J
	TPH-ORO (> C28-C40) <sup>c</sup>	ND	6.8	1.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-18	
<b>Lab Sample ID:</b>	TD49314-10	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 86.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487846.D	5	12/24/19 19:51	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.06 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0029	0.0020	mg/kg	
108-88-3	Toluene	ND	0.023	0.0052	mg/kg	
100-41-4	Ethylbenzene	ND	0.023	0.0058	mg/kg	
1330-20-7	Xylene (total)	ND	0.023	0.0053	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	93%		63-138%
17060-07-0	1,2-Dichloroethane-D4	97%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-18	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-10	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	86.6
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	298	57	mg/kg	10	12/27/19 03:14	PK	EPA 300.0
Solids, Percent	86.6		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-18	
<b>Lab Sample ID:</b>	TD49314-10A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 86.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356987.D	1	12/28/19 07:44	ALA	n/a	n/a	L:GLA2846
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.7	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-18	
<b>Lab Sample ID:</b>	TD49314-10A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 86.6
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002613.D	1	12/31/19 10:33	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	1.21	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40) <sup>c</sup>	ND	5.7	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-19	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-11	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.3
<b>Method:</b>	SW846 8260C SW846 5030A		
<b>Project:</b>	ETECH:New Mexico		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487847.D	5	12/24/19 20:18	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.12 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0028	0.0020	mg/kg	
108-88-3	Toluene	ND	0.022	0.0051	mg/kg	
100-41-4	Ethylbenzene	ND	0.022	0.0056	mg/kg	
1330-20-7	Xylene (total)	ND	0.022	0.0052	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		59-126%
2037-26-5	Toluene-D8	89%		70-139%
460-00-4	4-Bromofluorobenzene	92%		63-138%
17060-07-0	1,2-Dichloroethane-D4	96%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-19	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-11	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.3
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	156	28	mg/kg	5	12/27/19 03:30	PK	EPA 300.0
Solids, Percent	87.3		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-19	
<b>Lab Sample ID:</b>	TD49314-11A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 87.3
<b>Project:</b>	ETECH:New Mexico	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356989.D	1	12/28/19 08:07	ALA	n/a	n/a	L:GLA2846
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.20 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.2	3.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		63-139%
540-36-3	1,4-Difluorobenzene	95%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-19	
<b>Lab Sample ID:</b>	TD49314-11A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 87.3
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002614.D	1	12/31/19 10:54	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	1.40	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40) <sup>c</sup>	ND	5.7	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	73%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	EW						
<b>Lab Sample ID:</b>	TD49314-12					<b>Date Sampled:</b>	12/17/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19
<b>Method:</b>	SW846 8260C SW846 5030A					<b>Percent Solids:</b>	83.9
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487848.D	5	12/24/19 20:45	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.00 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0030	0.0021	mg/kg	
108-88-3	Toluene	ND	0.024	0.0055	mg/kg	
100-41-4	Ethylbenzene	ND	0.024	0.0060	mg/kg	
1330-20-7	Xylene (total)	ND	0.024	0.0055	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		59-126%
2037-26-5	Toluene-D8	87%		70-139%
460-00-4	4-Bromofluorobenzene	93%		63-138%
17060-07-0	1,2-Dichloroethane-D4	96%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	EW	<b>Date Sampled:</b>	12/17/19
<b>Lab Sample ID:</b>	TD49314-12	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	83.9
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	38.8	12	mg/kg	2	12/27/19 03:47	PK	EPA 300.0
Solids, Percent	83.9		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	EW						
<b>Lab Sample ID:</b>	TD49314-12A					<b>Date Sampled:</b>	12/17/19
<b>Matrix:</b>	SO - Soil					<b>Date Received:</b>	12/24/19
<b>Method:</b>	SW846 8015C					<b>Percent Solids:</b>	83.9
<b>Project:</b>	ETECH:New Mexico						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356991.D	1	12/28/19 08:30	ALA	n/a	n/a	L:GLA2846
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.20 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.7	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	EW	
<b>Lab Sample ID:</b>	TD49314-12A	<b>Date Sampled:</b> 12/17/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 83.9
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002615.D	1	12/31/19 11:16	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	3.58	5.9	0.51	mg/kg	J
	TPH-ORO (> C28-C40) <sup>c</sup>	ND	5.9	1.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-15	
<b>Lab Sample ID:</b>	TD49314-13	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8260C SW846 5030A	<b>Percent Solids:</b> 87.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R03487849.D	5	12/24/19 21:12	ZQ	12/24/19 14:25	n/a	VR2356
Run #2							

	Initial Weight	Final Volume
Run #1	5.15 g	100 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0028	0.0019	mg/kg	
108-88-3	Toluene	ND	0.022	0.0051	mg/kg	
100-41-4	Ethylbenzene	ND	0.022	0.0056	mg/kg	
1330-20-7	Xylene (total)	ND	0.022	0.0052	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		59-126%
2037-26-5	Toluene-D8	88%		70-139%
460-00-4	4-Bromofluorobenzene	93%		63-138%
17060-07-0	1,2-Dichloroethane-D4	97%		54-123%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-15	<b>Date Sampled:</b>	12/16/19
<b>Lab Sample ID:</b>	TD49314-13	<b>Date Received:</b>	12/24/19
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	87.5
<b>Project:</b>	ETECH:New Mexico		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	170	28	mg/kg	5	12/27/19 04:04	PK	EPA 300.0
Solids, Percent	87.5		%	1	12/26/19	LC	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-15	
<b>Lab Sample ID:</b>	TD49314-13A	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C	<b>Percent Solids:</b> 87.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LA356967.D	1	12/28/19 03:56	ALA	n/a	n/a	L:GLA2846
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.00 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	6.4	3.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		63-139%
540-36-3	1,4-Difluorobenzene	96%		52-140%

(a) Analysis performed at SGS Scott, LA.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS North America Inc.

## Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-15	
<b>Lab Sample ID:</b>	TD49314-13A	<b>Date Sampled:</b> 12/16/19
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/24/19
<b>Method:</b>	SW846 8015C SW846 3546	<b>Percent Solids:</b> 87.5
<b>Project:</b>	ETECH:New Mexico	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	LG002616.D	1	12/31/19 11:37	ALA	12/30/19 09:30	L:OP15957	L:GLG920
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28) <sup>b</sup>	2.21	5.7	0.49	mg/kg	J
	TPH-ORO (> C28-C40) <sup>b</sup>	1.11	5.7	1.1	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	65%		31-127%

(a) Analysis performed at SGS Scott, LA.

(b) Associated CCV outside of control limits high.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





Houston, TX

## Section 4

4

### Misc. Forms

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody



## CHAIN OF CUSTODY

**SGS North America Inc. - Houston**  
10165 Harwin Dr, Ste 150 Houston, TX 77036  
TEL. 713-271-4700 FAX: 713-271-4770  
[www.sgs.com/ehsusa](http://www.sgs.com/ehsusa)

10935

PAGE 1 OF 2

<b>SGS North America Inc. - Houston</b> 10165 Harwin Dr. Ste 150 Houston, TX 77036 TEL 713-271-4700 FAX: 713-271-4770 www.sgs.com/ehsusa				FED-EX Tracking # <b>453346072460</b>		Bottle Order Control # <b>AP-124614-46</b>																																																																																																																																																	
Client / Reporting Information Company Name: <b>Key Energy / Eken Env</b> Street Address: <b>3100 Plains Hwy</b> City: <b>HOVINGTON NM</b> State: <b>88260</b> Project Contact: <b>Joe Lowery</b> E-mail: <b>joe@ekenenv.com</b> Phone #: <b>432-460-4450</b> Sampler(s) Name(s): <b>Joe Lowery</b>				Project Information Project Name: <b>Whites City Rd Incident</b> Street: <b>Rural Eddy, NM</b> Billing Information (if different from Report to) Company Name: <b>Key Energy (10 Mary St)</b> Street Address: _____ City: _____ State: _____ Zip: _____ Client Purchase Order #: _____ Project Manager: _____ Attention: _____				Requested Analyses <div style="display: flex; justify-content: space-between;"> <div> <b>BTCL</b>  <b>TPH 0015 m. EV</b>  <b>CL E-300</b> </div> <div> <b>Matrix Codes</b>            DW - Drinking Water            GW - Ground Water            WW - Water            SW - Surface Water            SO - Soil            SL - Sludge            SED - Sediment            OI - Oil            LIQ - Other Liquid            AIR - Air            SOL - Other Solid            WP - Wipe            FB - Field Blank            EB - Equipment Blank            RB - Rinse Blank            TB - Trip Blank         </div> </div>																																																																																																																																															
Field ID / Point of Collection <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Field ID / Point of Collection</th> <th>Date</th> <th>Time</th> <th>Sampled By</th> <th>Matrix</th> <th># of bottles</th> <th>HQ</th> <th>NeOH</th> <th>Zn/NaOH</th> <th>PbO3</th> <th>H2SO4</th> <th>NO3</th> <th>D Water</th> <th>MECH</th> <th>TEP</th> <th>HW/SCA</th> <th>SINCORE</th> <th>OTHER</th> </tr> </thead> <tbody> <tr> <td>1 FL-16</td> <td>12/16/14</td> <td>2:20</td> <td>SL</td> <td>S</td> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 FL-17</td> <td>12/16/14</td> <td>2:30</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 SW-2</td> <td>12/17/14</td> <td>10:00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4 SW-3</td> <td></td> <td>10:15</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5 SW-7</td> <td></td> <td>10:45</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6 SW-9</td> <td></td> <td>11:15</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7 SW-10</td> <td></td> <td>11:30</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Field ID / Point of Collection	Date	Time	Sampled By	Matrix	# of bottles	HQ	NeOH	Zn/NaOH	PbO3	H2SO4	NO3	D Water	MECH	TEP	HW/SCA	SINCORE	OTHER	1 FL-16	12/16/14	2:20	SL	S	4													2 FL-17	12/16/14	2:30																3 SW-2	12/17/14	10:00																4 SW-3		10:15																5 SW-7		10:45																6 SW-9		11:15																7 SW-10		11:30																Turnaround Time (Business days) _____			
Field ID / Point of Collection	Date	Time	Sampled By	Matrix	# of bottles	HQ	NeOH	Zn/NaOH	PbO3	H2SO4	NO3	D Water	MECH	TEP	HW/SCA	SINCORE	OTHER																																																																																																																																						
1 FL-16	12/16/14	2:20	SL	S	4																																																																																																																																																		
2 FL-17	12/16/14	2:30																																																																																																																																																					
3 SW-2	12/17/14	10:00																																																																																																																																																					
4 SW-3		10:15																																																																																																																																																					
5 SW-7		10:45																																																																																																																																																					
6 SW-9		11:15																																																																																																																																																					
7 SW-10		11:30																																																																																																																																																					
Approved By (SGS PM) / Date: _____				Data Deliverable Information <input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULL1 (Level 3+4) <input type="checkbox"/> REDT1 (Level 3+4) <input type="checkbox"/> Commercial "C" Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw Data				Comments / Special Instructions _____ _____ _____ _____																																																																																																																																															
Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT _____				Sample Custody must be documented below each time samples change possession, including courier delivery.				_____																																																																																																																																															
Relinquished by: <b>Joe Lowery</b>		Date / Time: <b>12/20/14</b>		Received By: <b>1</b> <b>falox</b>		Date / Time: <b>2</b> <b>falox</b>		Received By: <b>2</b> <b>falox</b>		Date / Time: <b>12/24/14</b>																																																																																																																																													
Relinquished by: <b>3</b>		Date / Time: <b>3</b>		Received By: <b>3</b>		Date / Time: <b>4</b>		Received By: <b>4</b>		Date / Time: <b>4</b>																																																																																																																																													
Relinquished by: <b>5</b>		Date / Time: <b>5</b>		Received By: <b>5</b>		Date / Time: <b>5</b>		Received By: <b>5</b>		Date / Time: <b>5</b>																																																																																																																																													

EHS-A-QAC-0024-00-FORM-Houston - Standard COC

## TD49314: Chain of Custody

Page 1 of 6



SGS

## CHAIN OF CUSTODY

SGS North America Inc. - Houston  
10165 Harwin Dr. Ste 150 Houston, TX 77036  
TEL 713-271-4700 FAX: 713-271-4770  
www.sgs.com/ehsusa

10936

PAGE 2 OF 2

<b>Client / Reporting Information</b> Company Name: Key Energy / Ethena Street Address: 3100 Plains Hwy City: Lovington, NM State: NM Project Contact: Joel Lowry Phone #: 432-406-4450 Sampler(s) Name(s): Joel Lowry		<b>Project Information</b> Project Name: Whites City Rd Incident Street: Duval Eddy, NM City: NM State: NM Billing Information (if different from Report to): Company Name: Street Address: City: State: Zip: Client Purchase Order #: Project Manager: Attention:		FED-EX Tracking #: 443540092471 Bottle Order Control #: AP-121619-46 SGS Quote #: 16434 TDU9314	
<b>Requested Analyses</b> DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIO - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank		<b>Matrix Codes</b> LAB USE ONLY			
Turnaround Time (Business days) <input type="checkbox"/> Standard 10 Business Days <input type="checkbox"/> 5 Business Days RUSH <input type="checkbox"/> 4 Business Days RUSH <input type="checkbox"/> 3 Business Days RUSH <input checked="" type="checkbox"/> 2 Business Days RUSH <input type="checkbox"/> 1 Business Day EMERGENCY Emergency & Rush TIA data available via Lablink Approval needed for RUSH/Emergency TAT	Approved By (SGS PM) / Date: _____ _____ _____	<b>Data Deliverable Information</b> <input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLY (Level 3+4) <input type="checkbox"/> REDT1 (Level 3+4) <input type="checkbox"/> Commercial "C" Commercial "A" = Results Only Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw Data		Comments / Special Instructions	
Sample Custody must be documented below each time samples change possession, including courier delivery.					
Relinquished By: 1 Joel Lowry Relinquished By: 3 Relinquished By: 5	Date / Time: 12/10/19 3:15 Date / Time: Date / Time:	Received By: 1 Felix Received By: 3 Received By: 5	Date / Time: Date / Time: Date / Time:	Relinquished By: 2 Felix Relinquished By: 4 Relinquished By:	Date / Time: Date / Time: Date / Time:
Preserved where applicable <input type="checkbox"/> Intact <input type="checkbox"/> Not intact <input type="checkbox"/> Absent On Ice <input type="checkbox"/> Cooler Temp. °C Therm ID					

EHSA-QAC-0024-00-FORM-Houston - Standard COC

TD49314: Chain of Custody

Page 2 of 6

SGS

SGS Sample Receipt Summary

Job Number: TD49314      Client: KEY ENERGY      Project: WHITE CITY RD

Date / Time Received: 12/24/2019 12:00:00 PM      Delv Method: FEDEX      Airbill #'s: 493390072460

# of Coolers: 2      Therm ID: IR-3;      Temp Adjustment Factor: 0;

Cooler Temps (Initial/Adjusted): #1: (2/2); #2: (2.5/2.5);

Test Strip Lot #s:	pH 1-12:	10D0391	pH 12+:	Other: (Specify)
<b>Cooler Information</b>	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Cooler temp verification:				
3. Cooler media:	Ice (Bag)			
<b>Trip Blank Information</b>	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Type Of TB Received	<b>W</b>	<b>or</b>	<b>S</b>	<b>N/A</b>
	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<b>Misc. Information</b>				
Number of terracores:			Number of Lab Filtered Metals:	
Number of 5035 Field Kits:				
Residual Chlorine Test Strip Lot #:				

<b>Sample Information</b>	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Condition of sample:			Intact	
5. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
6. Dates/Times/IDs on COC match Sample Label	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
7. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
8. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
9. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
11. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
12. Special Instructions (compositing/filtering) clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Voa Soil Kits/Jars received past 48hrs?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
14. % Solids Jar received?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
15. Residual Chlorine Present?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Comments

## Sample Receipt Log

Job #: TD49314

Date / Time Received: 12/24/2019 12:00:00 PM

Initials: MAURICIM

Client: KEY ENERGY

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD49314-1	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-1	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-1	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-1	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-2	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-2	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-2	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-2	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-3	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-3	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-3	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-3	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-4	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-4	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-4	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-4	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-5	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-5	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-5	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-5	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-6	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-6	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-6	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2

TD49314: Chain of Custody

Page 4 of 6

## Sample Receipt Log

Job #: TD49314

Date / Time Received: 12/24/2019 12:00:00 PM

Initials: MAURICIM

Client: KEY ENERGY

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD49314-6	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-7	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-7	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-7	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
1	TD49314-7	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2	0	2
2	TD49314-8	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-8	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-8	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-8	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-9	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-9	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-9	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-9	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-10	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-10	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-10	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-10	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-11	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-11	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-11	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-11	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-12	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-12	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5

TD49314: Chain of Custody

Page 5 of 6

Sample Receipt Log

Job #: TD49314      Date / Time Received: 12/24/2019 12:00:00 PM      Initials: MAURICIM  
Client: KEY ENERGY

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
2	TD49314-12	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-12	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-13	8oz	1	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-13	4oz	2	2-109	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-13	4oz	3	VRFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5
2	TD49314-13	4oz	4	TPHFREEZ	N/P	Note #2 - Preservative check not applicable.	IR-3	2.5	0	2.5

4.1  
4



Houston, TX

## Section 5

### MS Volatiles

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



Method Blank Summary

Job Number: TD49314  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR2356-MB	R03487831.D	1	12/24/19	ZQ	n/a	n/a	VR2356

The QC reported here applies to the following samples: Method: SW846 8260C

TD49314-1, TD49314-2, TD49314-3, TD49314-4, TD49314-5, TD49314-6, TD49314-7, TD49314-8, TD49314-9, TD49314-10, TD49314-11, TD49314-12, TD49314-13

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.35	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	1.0	ug/kg	
108-88-3	Toluene	ND	4.0	0.92	ug/kg	
1330-20-7	Xylene (total)	ND	4.0	0.93	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	115% 59-126%
2037-26-5	Toluene-D8	90% 70-139%
460-00-4	4-Bromofluorobenzene	97% 63-138%
17060-07-0	1,2-Dichloroethane-D4	105% 54-123%

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD49314  
Account: KEYENTXH Key Energy  
Project: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR2356-BS	R03487829.D	1	12/24/19	ZQ	n/a	n/a	VR2356
VR2356-BSD	R03487834.D	5	12/24/19	ZQ	n/a	n/a	VR2356

The QC reported here applies to the following samples: Method: SW846 8260C

TD49314-1, TD49314-2, TD49314-3, TD49314-4, TD49314-5, TD49314-6, TD49314-7, TD49314-8, TD49314-9, TD49314-10, TD49314-11, TD49314-12, TD49314-13

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	47.8	96	45.6	91	5	58-124/30
100-41-4	Ethylbenzene	50	43.8	88	41.1	82	6	57-124/30
108-88-3	Toluene	50	43.3	87	40.9	82	6	67-119/30
1330-20-7	Xylene (total)	150	132	88	125	83	5	62-120/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	117%	119%	59-126%
2037-26-5	Toluene-D8	90%	89%	70-139%
460-00-4	4-Bromofluorobenzene	98%	99%	63-138%
17060-07-0	1,2-Dichloroethane-D4	103%	101%	54-123%

\* = Outside of Control Limits.



Houston, TX

## Section 6

### General Chemistry

#### QC Data Summaries

---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD49314  
Account: KEYENTXH - Key Energy  
Project: ETECH:New Mexico

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP56156/GN3440	5.0	0.0	mg/kg	100	99.9	99.9	90-110%

Associated Samples:  
Batch GP56156: TD49314-1, TD49314-2, TD49314-3, TD49314-4, TD49314-5, TD49314-6, TD49314-7, TD49314-8, TD49314-9, TD49314-10, TD49314-11, TD49314-12, TD49314-13  
(\*) Outside of QC limits

6.1  
6

DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD49314  
Account: KEYENTXH - Key Energy  
Project: ETECH:New Mexico

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP56156/GN3440	TD49314-1	mg/kg	299	299	0.0	0-20%
Solids, Percent	GN3417	TD49314-1	%	85.7	85.3	0.5	0-5%

Associated Samples:  
Batch GN3417: TD49314-1, TD49314-2, TD49314-3, TD49314-4, TD49314-5, TD49314-6, TD49314-7, TD49314-8, TD49314-9, TD49314-10, TD49314-11, TD49314-12, TD49314-13  
Batch GP56156: TD49314-1, TD49314-2, TD49314-3, TD49314-4, TD49314-5, TD49314-6, TD49314-7, TD49314-8, TD49314-9, TD49314-10, TD49314-11, TD49314-12, TD49314-13  
(\*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD49314  
Account: KEYENTXH - Key Energy  
Project: ETECH:New Mexico

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP56156/GN3440	TD49314-1	mg/kg	299	1160	563	22.7N	80-120%

Associated Samples:  
Batch GP56156: TD49314-1, TD49314-2, TD49314-3, TD49314-4, TD49314-5, TD49314-6, TD49314-7, TD49314-8, TD49314-9, TD49314-10, TD49314-11, TD49314-12, TD49314-13  
(\*) Outside of QC limits  
(N) Matrix Spike Rec. outside of QC limits

6.3  
6



Houston, TX

## Section 7

### Misc. Forms

### Custody Documents and Other Forms

(SGS Scott, LA)

---

Includes the following where applicable:

- Chain of Custody

SGS

## CHAIN OF CUSTODY

Page 1 of 2

10165 Harwin Drive, Houston, TX 77036  
TEL: 713-271-4700 FAX: 713-271-4770

[illegible]

## TD49314: Chain of Custody

Page 1 of 4

SGS Scott, LA

SGS

78 of 92

TD49314





## Page 2 of 2

10165 Harwin Drive, Houston, TX 77036  
TEL: 713-271-4700 FAX: 713-271-4770

[illegible]

RUSH

## TD49314: Chain of Custody

Page 2 of 4

1.2

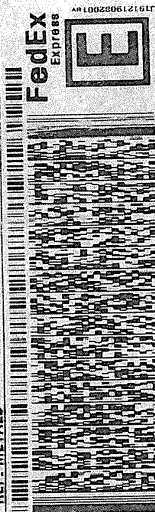
DV440

SVCS: SJANUARDI UFFETH, 1110A, TCU  
 ORIGIN: ID-SGRA (713) 271  
 SAMPLE MANAGEMENT  
 SGS-HOUSTON  
 10155 BENJAMIN DRIVE  
 SUITE 100  
 HOUSTON, TX 77036  
 UNITED STATES US

TO: **RON BENJAMIN**  
**ACCUTEST LABORATORIES**  
**500 AMBASSADOR CAFFERY PKWY**

SCOTT LA 70583

(837) 237-4776  
 REF: METALS



FRI - 27 DEC 3:00P  
 STANDARD OVERNIGHT

3 of 3  
 MPN# 4905 2699 3715  
 Met# 4905 2699 3690

XH LFTA

70583  
 LA-US  
 LFT



TD49314: Chain of Custody

Page 3 of 4

SGS Sample Receipt Summary

Job Number: TD49314

Client: SGS NORTH AMERICA

Project: ETECH NEW MEXICO

Date / Time Received: 12/27/2019 9:30:00 AM

Delivery Method: FedEx

Airbill #s: 4905 2699 3715

Cooler Temps (Initial/Adjusted): #1: (1.2/1.2);

Cooler Security

Y or N

Y or N

1. Custody Seals Present:

☒

☐

3. COC Present:

☒

☐

2. Custody Seals Intact:

☒

☐

4. Smpl Dates/Time OK

☒

☐

Cooler Temperature

Y or N

1. Temp criteria achieved:

☒

☐

2. Thermometer ID:

DV440; DV440;

3. Cooler media:

Ice (direct contact)

4. No. Coolers:

1

Quality Control Preservation

Y or N

N/A

1. Trip Blank present / cooler:

☐

☐

☒

2. Trip Blank listed on COC:

☐

☐

☒

3. Samples preserved properly:

☒

☐

4. VOCs headspace free:

☐

☐

☒

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles:

☒

☐

2. Container labeling complete:

☒

☐

3. Sample container label / COC agree:

☒

☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT:

☒

☐

2. All containers accounted for:

☒

☐

3. Condition of sample:

Intact

Sample Integrity - Instructions

Y or N

N/A

1. Analysis requested is clear:

☒

☐

2. Bottles received for unspecified tests

☐

☒

3. Sufficient volume recvd for analysis:

☒

☐

4. Compositing instructions clear:

☐

☐

☒

5. Filtering instructions clear:

☐

☐

☒

Comments



Houston, TX

## Section 8

### GC Volatiles

### QC Data Summaries

(SGS Scott, LA)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: TD49314

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLC2577-MB1	LC081072.D	1	12/27/19	NN	n/a	n/a	GLC2577

The QC reported here applies to the following samples:

Method: SW846 8015C

TD49314-7A

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	5.50	5.0	2.4	mg/kg	

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	92% 63-139%
540-36-3	1,4-Difluorobenzene	97% 52-140%

8.1.1

8

Method Blank Summary

Job Number: TD49314  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLA2846-MB1	LA356889.D	1	12/27/19	NN	n/a	n/a	GLA2846

The QC reported here applies to the following samples: Method: SW846 8015C

TD49314-1A, TD49314-2A, TD49314-3A, TD49314-4A, TD49314-5A, TD49314-6A, TD49314-8A, TD49314-9A, TD49314-10A, TD49314-11A, TD49314-12A, TD49314-13A

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	5.0	2.4	mg/kg	

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	98% 63-139%
540-36-3	1,4-Difluorobenzene	98% 52-140%

8.1.2  
8

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: TD49314  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLC2577-BS1	LC081070.D	1	12/27/19	NN	n/a	n/a	GLC2577
GLC2577-BSD1	LC081071.D	1	12/27/19	NN	n/a	n/a	GLC2577

The QC reported here applies to the following samples: Method: SW846 8015C

TD49314-7A

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	50	53.0	106	51.4	103	3	79-121/6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	112%	107%	63-139%
540-36-3	1,4-Difluorobenzene	102%	99%	52-140%

\* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD49314  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLA2846-BS2	LA356885.D	1	12/27/19	NN	n/a	n/a	GLA2846
GLA2846-BSD2	LA356887.D	1	12/27/19	NN	n/a	n/a	GLA2846

The QC reported here applies to the following samples: Method: SW846 8015C

TD49314-1A, TD49314-2A, TD49314-3A, TD49314-4A, TD49314-5A, TD49314-6A, TD49314-8A, TD49314-9A, TD49314-10A, TD49314-11A, TD49314-12A, TD49314-13A

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	50	41.7	83	42.9	86	3	79-121/6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	98%	63-139%
540-36-3	1,4-Difluorobenzene	99%	98%	52-140%

\* = Outside of Control Limits.



Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TD49314

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA60298-5MS	LC081075.D	1	12/27/19	NN	n/a	n/a	GLC2577
LA60298-5MSD	LC081076.D	1	12/27/19	NN	n/a	n/a	GLC2577
LA60298-5	LC081079.D	1	12/27/19	NN	n/a	n/a	GLC2577

The QC reported here applies to the following samples:

Method: SW846 8015C

TD49314-7A

CAS No.	Compound	LA60298-5 mg/kg	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	3.81	96.2	89.2	89	96.2	92.6	92	4	79-121/6

CAS No.	Surrogate Recoveries	MS	MSD	LA60298-5	Limits
460-00-4	4-Bromofluorobenzene	110%	112%	99%	63-139%
540-36-3	1,4-Difluorobenzene	97%	98%	97%	52-140%

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TD49314

Account: ALGC SGS Houston, TX

Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA60258-8MS	LA356955.D	1	12/28/19	NN	n/a	n/a	GLA2846
LA60258-8MSD	LA356957.D	1	12/28/19	NN	n/a	n/a	GLA2846
LA60258-8	LA356953.D	1	12/28/19	NN	n/a	n/a	GLA2846

The QC reported here applies to the following samples:

Method: SW846 8015C

TD49314-1A, TD49314-2A, TD49314-3A, TD49314-4A, TD49314-5A, TD49314-6A, TD49314-8A, TD49314-9A, TD49314-10A, TD49314-11A, TD49314-12A, TD49314-13A

CAS No.	Compound	LA60258-8 mg/kg	Spike Q mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	481	401	83	481	413	86	3	79-121/6

CAS No.	Surrogate Recoveries	MS	MSD	LA60258-8	Limits
460-00-4	4-Bromofluorobenzene	98%	98%	96%	63-139%
540-36-3	1,4-Difluorobenzene	98%	100%	97%	52-140%

\* = Outside of Control Limits.



Houston, TX

## Section 9

### GC/LC Semi-volatiles

#### QC Data Summaries

(SGS Scott, LA)

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: TD49314  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15957-MB	LG002596.D	1	12/31/19	PC	12/30/19	OP15957	GLG920

The QC reported here applies to the following samples: Method: SW846 8015C

TD49314-1A, TD49314-2A, TD49314-3A, TD49314-4A, TD49314-5A, TD49314-6A, TD49314-7A, TD49314-8A, TD49314-9A, TD49314-10A, TD49314-11A, TD49314-12A, TD49314-13A

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	5.0	0.43	mg/kg	
	TPH-ORO (> C28-C40)	ND	5.0	0.92	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	88% 31-127%

9.1.1  
9

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD49314  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15957-BS1	LG002597.D	1	12/31/19	PC	12/30/19	OP15957	GLG920
OP15957-BSD1	LG002598.D	1	12/31/19	PC	12/30/19	OP15957	GLG920

The QC reported here applies to the following samples: Method: SW846 8015C

TD49314-1A, TD49314-2A, TD49314-3A, TD49314-4A, TD49314-5A, TD49314-6A, TD49314-7A, TD49314-8A, TD49314-9A, TD49314-10A, TD49314-11A, TD49314-12A, TD49314-13A

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	150	138	92	145	97	5	49-118/19

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	88%	94%	31-127%

\* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD49314  
Account: ALGC SGS Houston, TX  
Project: KEYENTXH: ETECH:New Mexico

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15957-BS2	LG002599.D	1	12/31/19	PC	12/30/19	OP15957	GLG920
OP15957-BSD2	LG002600.D	1	12/31/19	PC	12/30/19	OP15957	GLG920

The QC reported here applies to the following samples: Method: SW846 8015C

TD49314-1A, TD49314-2A, TD49314-3A, TD49314-4A, TD49314-5A, TD49314-6A, TD49314-7A, TD49314-8A, TD49314-9A, TD49314-10A, TD49314-11A, TD49314-12A, TD49314-13A

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-ORO (> C28-C40)	59.7	53.5	90	54.7	91	2	60-127/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	84%	84%	31-127%

\* = Outside of Control Limits.



Houston, TX

01/08/20

The results set forth herein are provided by SGS North America Inc.

**e-Hardcopy 2.0**  
Automated Report**Technical Report for****Key Energy**

ETECH: Whites City, Rd.

SGS Job Number: TD49693

Sampling Date: 01/03/20

**Report to:**

Key Energy  
1301 McKinney Street  
Houston, TX 77010  
msticker@keyenergy.com; jbest@keyenergy.com;  
joel@etechenv.com  
ATTN: Maury Sticker

Total number of pages in report: **21**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

John Watson  
Technical Director

Client Service contact: Electa Brown 713-271-4700

Certifications: TX (T104704220-19-34) AR (14-016-0) AZ (AZ0769) FL (E87628)  
KS (E-10366) LA (85695/04004) NJ (TX010) OK (2018-129) VA (10171)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.  
Test results relate only to samples analyzed.

1
2
3
4
5

# Table of Contents

-1-

<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Summary of Hits .....</b>	<b>4</b>
<b>Section 3: Sample Results .....</b>	<b>5</b>
<b>3.1:</b> TD49693-1: FL-3B .....	6
<b>3.2:</b> TD49693-2: FL-4B .....	7
<b>3.3:</b> TD49693-3: FL-7B .....	8
<b>3.4:</b> TD49693-4: FL-9B .....	9
<b>3.5:</b> TD49693-5: WW-B .....	10
<b>3.6:</b> TD49693-6: NW-4B .....	11
<b>3.7:</b> TD49693-7: SW-1B .....	12
<b>3.8:</b> TD49693-8: SW-5B .....	13
<b>Section 4: Misc. Forms .....</b>	<b>14</b>
<b>4.1:</b> Chain of Custody .....	15
<b>Section 5: General Chemistry - QC Data Summaries .....</b>	<b>18</b>
<b>5.1:</b> Method Blank and Spike Results Summary .....	19
<b>5.2:</b> Duplicate Results Summary .....	20
<b>5.3:</b> Matrix Spike Results Summary .....	21





SGS North America Inc.

Sample Summary

Key Energy

Job No: TD49693

ETECH: Whites City, Rd.

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
TD49693-1	01/03/20	13:00	01/07/20	SO	Soil	FL-3B
TD49693-2	01/03/20	12:30	01/07/20	SO	Soil	FL-4B
TD49693-3	01/03/20	12:00	01/07/20	SO	Soil	FL-7B
TD49693-4	01/03/20	11:30	01/07/20	SO	Soil	FL-9B
TD49693-5	01/03/20	10:00	01/07/20	SO	Soil	WW-B
TD49693-6	01/03/20	11:00	01/07/20	SO	Soil	NW-4B
TD49693-7	01/03/20	13:30	01/07/20	SO	Soil	SW-1B
TD49693-8	01/03/20	10:30	01/07/20	SO	Soil	SW-5B

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

**Summary of Hits**

Page 1 of 1

**Job Number:** TD49693  
**Account:** Key Energy  
**Project:** ETECH: Whites City, Rd.  
**Collected:** 01/03/20

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>TD49693-1</b>	<b>FL-3B</b>					
Chloride		13.2	5.9		mg/kg	EPA 300.0
<b>TD49693-2</b>	<b>FL-4B</b>					
Chloride		11.1	6.0		mg/kg	EPA 300.0
<b>TD49693-3</b>	<b>FL-7B</b>					
Chloride		16.2	5.9		mg/kg	EPA 300.0
<b>TD49693-4</b>	<b>FL-9B</b>					
Chloride		34.2	5.9		mg/kg	EPA 300.0
<b>TD49693-5</b>	<b>WW-B</b>					
Chloride		17.9	5.4		mg/kg	EPA 300.0
<b>TD49693-6</b>	<b>NW-4B</b>					
Chloride		11.9	5.4		mg/kg	EPA 300.0
<b>TD49693-7</b>	<b>SW-1B</b>					
Chloride		12.1	5.4		mg/kg	EPA 300.0
<b>TD49693-8</b>	<b>SW-5B</b>					
Chloride		12.0	5.4		mg/kg	EPA 300.0



Houston, TX

Section 3



## Sample Results

## Report of Analysis

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-3B	<b>Date Sampled:</b>	01/03/20
<b>Lab Sample ID:</b>	TD49693-1	<b>Date Received:</b>	01/07/20
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	83.6
<b>Project:</b>	ETECH: Whites City, Rd.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	13.2	5.9	mg/kg	1	01/07/20 22:06	PK	EPA 300.0
Solids, Percent	83.6		%	1	01/08/20	PK	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-4B	<b>Date Sampled:</b>	01/03/20
<b>Lab Sample ID:</b>	TD49693-2	<b>Date Received:</b>	01/07/20
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	83.6
<b>Project:</b>	ETECH: Whites City, Rd.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	11.1	6.0	mg/kg	1	01/07/20 22:57	PK	EPA 300.0
Solids, Percent	83.6		%	1	01/08/20	PK	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-7B	<b>Date Sampled:</b>	01/03/20
<b>Lab Sample ID:</b>	TD49693-3	<b>Date Received:</b>	01/07/20
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	83.7
<b>Project:</b>	ETECH: Whites City, Rd.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	16.2	5.9	mg/kg	1	01/07/20 23:13	PK	EPA 300.0
Solids, Percent	83.7		%	1	01/08/20	PK	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	FL-9B	<b>Date Sampled:</b>	01/03/20
<b>Lab Sample ID:</b>	TD49693-4	<b>Date Received:</b>	01/07/20
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	84.2
<b>Project:</b>	ETECH: Whites City, Rd.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	34.2	5.9	mg/kg	1	01/07/20 23:30	PK	EPA 300.0
Solids, Percent	84.2		%	1	01/08/20	PK	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	WW-B	<b>Date Sampled:</b>	01/03/20
<b>Lab Sample ID:</b>	TD49693-5	<b>Date Received:</b>	01/07/20
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	91.9
<b>Project:</b>	ETECH: Whites City, Rd.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	17.9	5.4	mg/kg	1	01/07/20 23:47	PK	EPA 300.0
Solids, Percent	91.9		%	1	01/08/20	PK	SM 2540 G

RL = Reporting Limit



SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	NW-4B	<b>Date Sampled:</b>	01/03/20
<b>Lab Sample ID:</b>	TD49693-6	<b>Date Received:</b>	01/07/20
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	92.0
<b>Project:</b>	ETECH: Whites City, Rd.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	11.9	5.4	mg/kg	1	01/08/20 00:04	PK	EPA 300.0
Solids, Percent	92		%	1	01/08/20	PK	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-1B	<b>Date Sampled:</b>	01/03/20
<b>Lab Sample ID:</b>	TD49693-7	<b>Date Received:</b>	01/07/20
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	91.9
<b>Project:</b>	ETECH: Whites City, Rd.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	12.1	5.4	mg/kg	1	01/08/20 00:55	PK	EPA 300.0
Solids, Percent	91.9		%	1	01/08/20	PK	SM 2540 G

RL = Reporting Limit

SGS North America Inc.

Report of Analysis

Page 1 of 1

<b>Client Sample ID:</b>	SW-5B	<b>Date Sampled:</b>	01/03/20
<b>Lab Sample ID:</b>	TD49693-8	<b>Date Received:</b>	01/07/20
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	92.0
<b>Project:</b>	ETECH: Whites City, Rd.		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	12.0	5.4	mg/kg	1	01/08/20 01:12	PK	EPA 300.0
Solids, Percent	92		%	1	01/08/20	PK	SM 2540 G

RL = Reporting Limit



Houston, TX

## Section 4

4

### Misc. Forms

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody

110650



## CHAIN OF CUSTODY

**SGS North America Inc. - Houston**  
10165 Harwin Dr, Ste 150 Houston, TX 77036  
TEL: 713-271-4700 FAX: 713-271-4770  
[www.sgs.com/ehsusa](http://www.sgs.com/ehsusa)

PAGE OF

[illegible]

## 4.1

EHS-A-QAC-0024-00-FORM-Houston - Standard COC

## TD49693: Chain of Custody

Page 1 of 3

SGS Sample Receipt Summary

Job Number: TD49693      Client: ETECH ENV      Project: WHITE CITY RD  
Date / Time Received: 1/7/2020 9:00:00 AM      Delv Method: FEDEX      Airbill #'s: 493390069681  
# of Coolers: 1      Therm ID: IR-3;      Temp Adjustment Factor: 0;

Cooler Temps (Initial/Adjusted): #1: (2.1/2.1);

Test Strip Lot #s:	pH 1-12:	10D0391	pH 12+:	Other: (Specify)
<b>Cooler Information</b>	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>
1. Custody Seals Present:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Custody Seals Intact:	<input type="checkbox"/>		<input type="checkbox"/>	
3. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Cooler temp verification:				
3. Cooler media:	Ice (Bag)			
<b>Trip Blank Information</b>	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Type Of TB Received	<b>W</b>	<b>or</b>	<b>S</b>	<b>N/A</b>
	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<b>Misc. Information</b>				
Number of terracores:			Number of Lab Filtered Metals:	
Number of 5035 Field Kits:				
Residual Chlorine Test Strip Lot #:				

<b>Sample Information</b>	<b>Y</b>	<b>or</b>	<b>N</b>	<b>N/A</b>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Condition of sample:			Intact	
5. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
6. Dates/Times/IDs on COC match Sample Label	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
7. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
8. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
9. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
11. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
12. Special Instructions (compositing/filtering) clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Voa Soil Kits/Jars received past 48hrs?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
14. % Solids Jar received?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
15. Residual Chlorine Present?	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Comments

Sample Receipt Log

Job #: TD49693      Date / Time Received: 1/7/2020 9:00:00 AM      Initials: DAG  
Client: ETECH ENV

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD49693-1	4oz	1	4-14	N/P	Note #2 - Preservative check not applicable.	IR-3	2.1	0	2.1
1	TD49693-2	4oz	1	4-14	N/P	Note #2 - Preservative check not applicable.	IR-3	2.1	0	2.1
1	TD49693-3	4oz	1	4-14	N/P	Note #2 - Preservative check not applicable.	IR-3	2.1	0	2.1
1	TD49693-4	4oz	1	4-14	N/P	Note #2 - Preservative check not applicable.	IR-3	2.1	0	2.1
1	TD49693-5	4oz	1	4-14	N/P	Note #2 - Preservative check not applicable.	IR-3	2.1	0	2.1
1	TD49693-6	4oz	1	4-14	N/P	Note #2 - Preservative check not applicable.	IR-3	2.1	0	2.1
1	TD49693-7	4oz	1	4-14	N/P	Note #2 - Preservative check not applicable.	IR-3	2.1	0	2.1
1	TD49693-8	4oz	1	4-14	N/P	Note #2 - Preservative check not applicable.	IR-3	2.1	0	2.1

4.1  
4



Houston, TX

## Section 5

### General Chemistry

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries



METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD49693  
Account: KEYENTXH - Key Energy  
Project: ETECH: Whites City, Rd.

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP56265/GN3614	5.0	0.0	mg/kg	100	98.9	98.9	90-110%

Associated Samples:  
Batch GP56265: TD49693-1, TD49693-2, TD49693-3, TD49693-4, TD49693-5, TD49693-6, TD49693-7, TD49693-8  
(\*) Outside of QC limits

5.1  
5

DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD49693  
Account: KEYENTXH - Key Energy  
Project: ETECH: Whites City, Rd.

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP56265/GN3614	TD49693-1	mg/kg	13.2	12.7	3.9	0-20%
Solids, Percent	GN3613	TD49579-1	%	99.5	99.5	0.0	0-5%

Associated Samples:  
Batch GN3613: TD49693-1, TD49693-2, TD49693-3, TD49693-4, TD49693-5, TD49693-6, TD49693-7, TD49693-8  
Batch GP56265: TD49693-1, TD49693-2, TD49693-3, TD49693-4, TD49693-5, TD49693-6, TD49693-7, TD49693-8  
(\*) Outside of QC limits

5.2  
5

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: TD49693  
Account: KEYENTXH - Key Energy  
Project: ETECH: Whites City, Rd.

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP56265/GN3614	TD49693-1	mg/kg	13.2	118	130	98.8	80-120%

## Associated Samples:

Batch GP56265: TD49693-1, TD49693-2, TD49693-3, TD49693-4, TD49693-5, TD49693-6, TD49693-7, TD49693-8

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

## **Appendix D**

### **Photographic Log**