

Incident ID	
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>150</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <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.

State of New Mexico  
Oil Conservation Division

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

Printed Name: Ralph Tijerina Title: Director EHS  
Signature: *Ralph Tijerina* Date: 3/23/2020  
email: rtijerina@goodnightmidstream.com Telephone: 214-587-4964

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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## Closure

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

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

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

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

Printed Name: Ralph Tijerina Title: Director EHS  
Signature: *Ralph Tijerina* Date: 3/23/2020  
email: rtijerina@goodnightmidstream.com Telephone: 214-587-4964

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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

# Remediation Summary and Soil Closure Request

## Goodnight Midstream Permian, LLC Wrigley to Piper Pipeline

Lea County, New Mexico

Unit Letter O, Section 13, Township 21 South, Range 36 East

Latitude 32.472852 North, Longitude 103.217223 West

NMOCD Reference No. 1RP-pending

Prepared By:

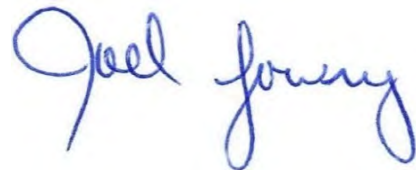
**Etech Environmental & Safety Solutions, Inc.**

3100 Plains Highway

Lovington, New Mexico 88260



Lance Crenshaw



Joel W. Lowry





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## 1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Goodnight Midstream Permian, LLC, has prepared this Remediation Summary and Soil Closure Request for the Release Site known as the Wrigley to Piper Pipeline. Details of the release are summarized below:

### Location of Release Source

Latitude: 32.472852 Longitude: -103.217223  
 Provided GPS are in WGS84 format.

Site Name: <u>Wrigley to Piper Pipeline</u>	Site Type: <u>Pipeline</u>
Date Release Discovered: <u>11/8/2019</u>	API # (if applicable):

Unit Letter	Section	Township	Range	County
O	13	21S	36E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☒ Private (Name Dasco Land and Cattle)

### Nature and Volume of Release

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) <u>3</u>	Volume Recovered (bbls) <u>0</u>
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) <u>590.2</u>	Volume Recovered (bbls) <u>0</u>
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?	<input checked="" 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 attributed to a failure in the pipeline connecting the Wrigley and Piper SWDs.

### 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.

## 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?	150 Ft.	
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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

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
150 Ft.	Chloride	EPA 300.0 or SM4500 Cl B	20000 mg/kg
	TPH (GRO + DRO + MRO)	EPA SW-846 Method 8015M Ext	2500 mg/kg
	DRO + GRO	EPA SW-846 Method 8015M	1000 mg/kg
	BTEX	EPA SW-846 Methods 8021b or 8260b	50 mg/kg
	Benzene	EPA SW-846 Methods 8021b or 8260b	10 mg/kg

## 4.0 REMEDIATION ACTIVITIES SUMMARY

On November 11, 12 and 15, 2019, Etech conducted an initial site assessment. During the initial site assessment, a series of hand-augered soil bores (SP 1 through SP 10) were advanced within the release margins in an effort to determine the vertical extent of soil impacts. In addition, hand-augered soil bores (NH1 - NH5, EH1 - EH 5, SH1 - SH5 and WH1-WH5) were advanced at the inferred edges of the affected area in an effort to determine the horizontal extent of soil impacts. During the advancement of the hand-augered soil bores, field soil samples were collected and field-screened for the presence of Volatile Organic Compounds utilizing a Photoionization Detector (PID) and/or concentrations of chloride utilizing a Hach Quantab ® chloride test kit.

Based on field observations and field test data, sixty-two (62) delineation soil samples were submitted to the laboratory for confirmation 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. Sample locations are depicted on Figure 4 - Site & Sample Location Map (Delineation). Concentrations of benzene, BTEX, TPH and chloride from delineation samples are summarized in Table 1a. Laboratory Analytical Reports are provided in Appendix C.

Upon conducting the initial release assessment, the NMOCD was provided with an information packet depicting relevant NMOCD Siting Criteria. Based on site conditions, laboratory analytical results from delineation soil samples and the size of the release, an alternative sampling plan consisting of the collection of excavation confirmation soil samples representing every 600 sq. ft. was proposed to the NMOCD; the alternative sampling plan was subsequently approved.

On December 2, 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 stockpiled on-site, atop an impermeable plastic liner, pending final disposition at an NMOCD-approved surface waste facility. The floor and sidewalls of the excavation were advanced until field observations and/or test results suggested BTEX, TPH and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standard.

On December 2, 2019, Etech collected four (4) excavation confirmation soil samples (FS1 - FS4) from the floor of the excavated area. The collected soil samples were field-screened for concentrations of chloride utilizing a Hach Quantab ® chloride test kit. The collected soil samples were then submitted to a certified commercial laboratory for analysis of BTEX, TPH and/or 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 December 3, 2019, Etech collected sixteen (16) excavation confirmation soil samples (FS5-FS10, WW1A, WW2B, WW3B, WW4A, WW5A and WW6 -WW10) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 4, 2019, Etech collected sixteen (16) excavation confirmation soil samples (WW11A, NW1A, SW1A, SW2b, SW3A, SW4, EW1B, EW2A, EW3A, EW4, EW5A, EW6, EW7, EW8, EW13 and EW14) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 5, 2019, Etech collected twelve (12) excavation confirmation soil samples (FS11-FS16, SW5, SW6b, EW9, EW10A, EW11C and EW12) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 6, 2019, Etech collected eight (8) excavation confirmation soil samples (FS17 - FS24) from the floor of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 9, 2019, Etech collected thirty-four (34) excavation confirmation soil samples (FS27-FS47, WW12, WW14, WW15B, NW2, NW3A, NW4, NW5A, NW6, NW7A, NW8, SW7C, SW8 and SW9) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 10, 2019, Etech collected twenty-six (26) excavation confirmation soil samples (FS48 - FS61, NW9A, NW10, NW11B, NW12 - NW14, SW10, SW11A, SW12, SW13, SW14A and FS62A) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 11, 2019, Etech collected twenty-four (24) excavation confirmation soil samples (FS63 - FS69, NW15, NW16A, NW17 - NW19, NW20A, NW21, NW22, NW29, SW15, SW16 - SW18, SW19A and SW20 - SW22) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 12, 2019, Etech collected twenty-one (21) excavation confirmation soil samples (FS70A, FS71-FS73, FS74B, FS75A, FS76, FS77A, NW23A, NW24-NW27, NW28A, SW23-SW25, SW26A, SW27, SW28 and SW29A) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 16, 2019, Etech collected three (3) excavation confirmation soil samples (FS78A, FS79 and NW30) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 17, 2019, Etech collected seventeen (17) excavation confirmation soil samples (FS80 - FS85, WWN1D, NW30F, NW31A, NW32 - NW34, SW31 - SW34 and EWN1) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 18, 2019, Etech collected seventeen (17) excavation confirmation soil samples (FS86 - FS88, FS89B, FS90 - FS92, NW35, NW36, NW37A, NW38, NW39, SW35, SW36A, SW37, SW38B and SW39) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 19, 2019, Etech collected ten (10) excavation confirmation soil samples (FS93A, FS94A, FS95A, FS96, FS97 NW40A, NW41, SW40, SW41A and SW42) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On December 30, 2019, Etech collected seven (7) excavation confirmation soil samples (SFFL1, SFFL2, SFWW1, SFWW2, EW15, SFEW1 and SFEW2) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be 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 EW 15, which exhibited a chloride concentration of 823 mg/kg. The excavation was advanced in the area characterized by soil sample EW 15.

On December 31, 2019, Etech collected seven (7) excavation confirmation soil samples (SFFL3, SFFL4, WW12, SFWW3B, SFWW4, SFEW3 and SFE4) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be 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 SFWW3, which exhibited a chloride concentration of 1,380 mg/kg. The excavation was advanced in the area characterized by soil sample SFWW3.

On January 2, 2020, Etech collected six (6) excavation confirmation soil samples (SFFL5, SFFL6, SFWWB5, SFWW6, SFEWB5 and SFEW6) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be 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 eleven (11) excavation confirmation soil samples (SFFS7 - SFFS10, SFWW7 - SFWW9, SFEW7, SFEW8A, SFEW9A and SFEW10) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On January 6, 2020, Etech collected twenty-one (21) excavation confirmation soil samples (SFFS11, SFFS12, SFF13B, SFFS14-SFFS17, SFWW11 - SFWW17, SFEW11A, SFEW12, SFEW13C, SFEW14, SFEW15B, SFEW16 and SFEW17) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be 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 SFEW12 which exhibited a chloride concentration of 3,190 mg/kg, SFEW14 which exhibited a chloride concentration of 3,210 mg/kg and SFEW17 which exhibited a chloride concentration of 2,990 mg/kg. The excavation was advanced in the areas characterized by soil samples SFEW12, SFEW14 and SFEW17.

On January 8, 2020, Etech collected six (6) excavation confirmation soil samples (SFFS18, SFFS19, SFWW18C, SFWW19, SFEW19, SFEW20B) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On January 9, 2020, Etech collected four (4) excavation confirmation soil samples (SFFS20, SFFS21, SFEW21A and SFEW22) from the floor and sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On January 13, 2020, Etech collected five (5) excavation confirmation soil samples (SFWW22B, SFWW23B, SFWW24B, SFWW25 and SFWW26B) from the sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard in each of the submitted soil samples.

On January 18, 2020, Etech collected one (1) excavation confirmation soil sample (SFEW18) from the sidewall of the excavated area and submitted the soil sample to the laboratory for analysis of chloride concentrations which were determined



to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard.

On January 22, 2020, Etech collected four (4) excavation confirmation soil samples (EW15B, SFEW12B, SFEW14B and SFEW17B) from the sidewalls of the excavated areas characterized by soil samples EW15, SFEW12, SFEW14 and SFEW17 and submitted them to the laboratory for analysis of chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard.

On February 3, 2020, Etech collected five (5) excavation confirmation soil samples (NW42A, NW43B, NW44B, NW45A and EWN2) from the sidewalls of the excavated area and submitted them to the laboratory for analysis of BTEX, TPH and chloride concentrations which were determined to be 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 NW44B which exhibited a chloride concentration of 631 mg/kg. The excavation was advanced in the area characterized by soil sample NW44B.

On February 6, 2020, Etech collected one (1) excavation confirmation soil sample (NW44C) from the excavated area characterized by soil sample NW44B and submitted them to the laboratory for analysis of chloride concentrations which were determined to be below the applicable NMOCD Closure Criteria and/or the NMOCD Reclamation Standard.

An "Overview Map" is provided as Figure 3. "Site & Sample Location Maps" are provided as Figures 5a-5f. Concentrations of benzene, BTEX, TPH and chloride from excavation confirmation soil samples are summarized in Table 1b. Field data and soil profile logs, if applicable, are provided as Appendix B.

The final dimensions of the excavated area were 2,266 Ft. in length, 10 Ft. to 175 Ft in width and ranged from 3 to 4 Ft. in depth. During the course of remediation activities approximately 17,500 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 will be reseeded with an agency and/or landowner-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the site.

## **6.0 SOIL CLOSURE REQUEST**

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

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

This report has been prepared for the benefit of Goodnight Midstream Permian, LLC. Use of the information contained in this report is prohibited within the consent of Etech and/or Goodnight Midstream Permian, LLC.



## **8.0 DISTRIBUTION**

***Goodnight Midstream Permian, LLC***

*5910 N Central Expy  
Dallas, TX 75206*

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

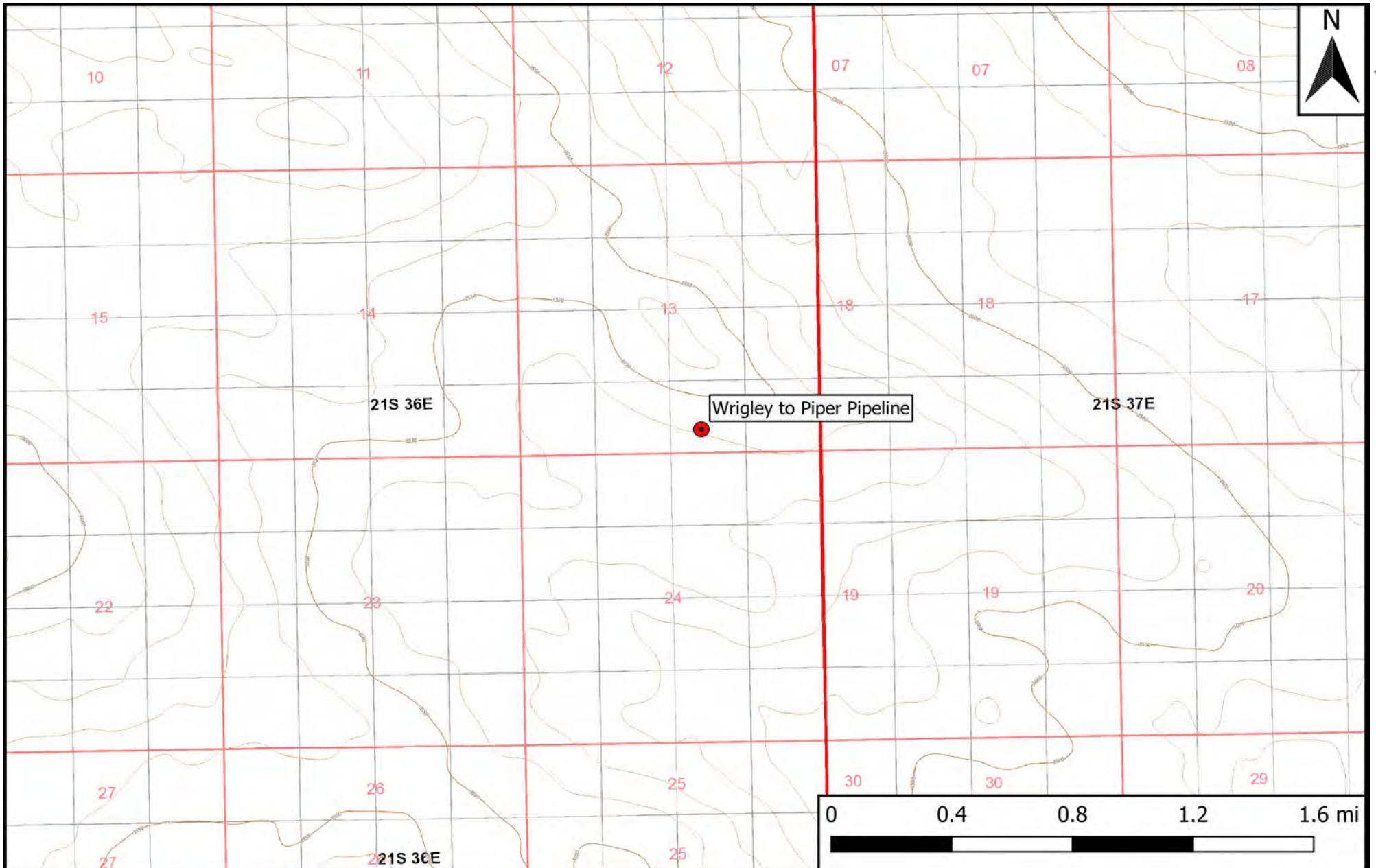
*Oil Conservation Division, District 1  
1220 South St. Francis Drive  
Santa Fe, NM 87505*

***Hobbs Field Office***

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

*(Electronic Submission)*

Figures



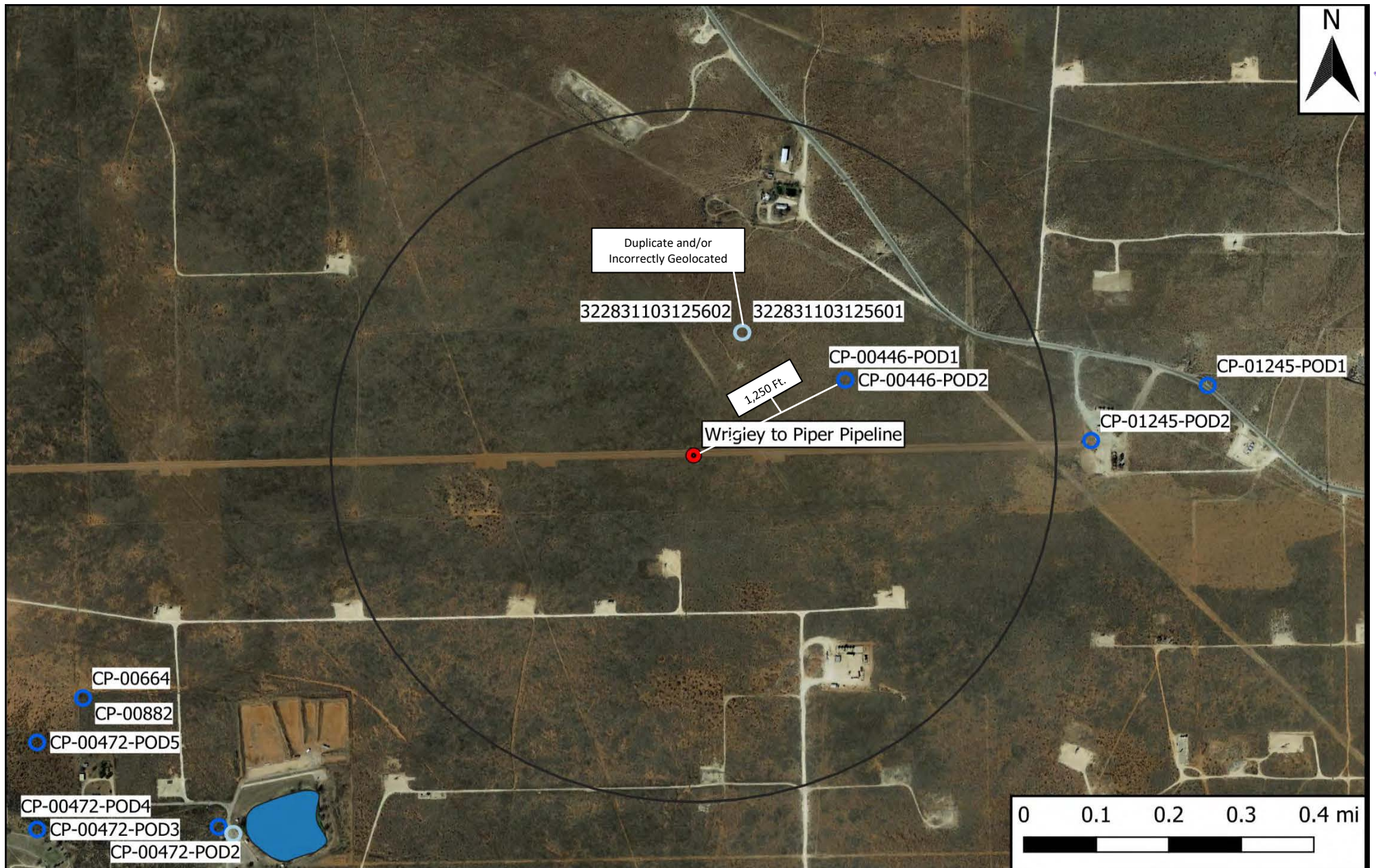
Legend  
 ● Site Location

**Figure 1**  
 Topographic Map  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223  
 Lea County



Drafted: mag      Checked: jwl      Date: 3/19/20





**Legend**

<span style="color: red;">●</span> Site Location	<span style="color: lightblue;">○</span> Well - USGS
<span style="color: orange;">—</span> Potash Mine Workings	<span style="color: blue;">○</span> Well - NMOSE
<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> 0.5 Mi Radius	<span style="background-color: pink; display: inline-block; width: 10px; height: 10px;"></span> High Karst
<span style="background-color: lightblue; display: inline-block; width: 10px; height: 10px;"></span> 1% Annual Flood Chance	<span style="background-color: orange; display: inline-block; width: 10px; height: 10px;"></span> Medium Karst
<span style="background-color: blue; display: inline-block; width: 10px; height: 10px;"></span> Surface Water	

**Figure 2**  
 Aerial Map  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223  
 Lea County

**eTECH**

*Environmental & Safety Solutions, Inc.*

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**Legend:**

- Pipeline
- Affected Area
- Excavated Area
- Fence

**Figure 3**

**Overview Map**

Goodnight Midstream Permian, LLC

Wrigley to Piper Pipeline

GPS: 32.472852, -103.217223

Lea County

**eTECH**

*Environmental & Safety Solutions, Inc.*



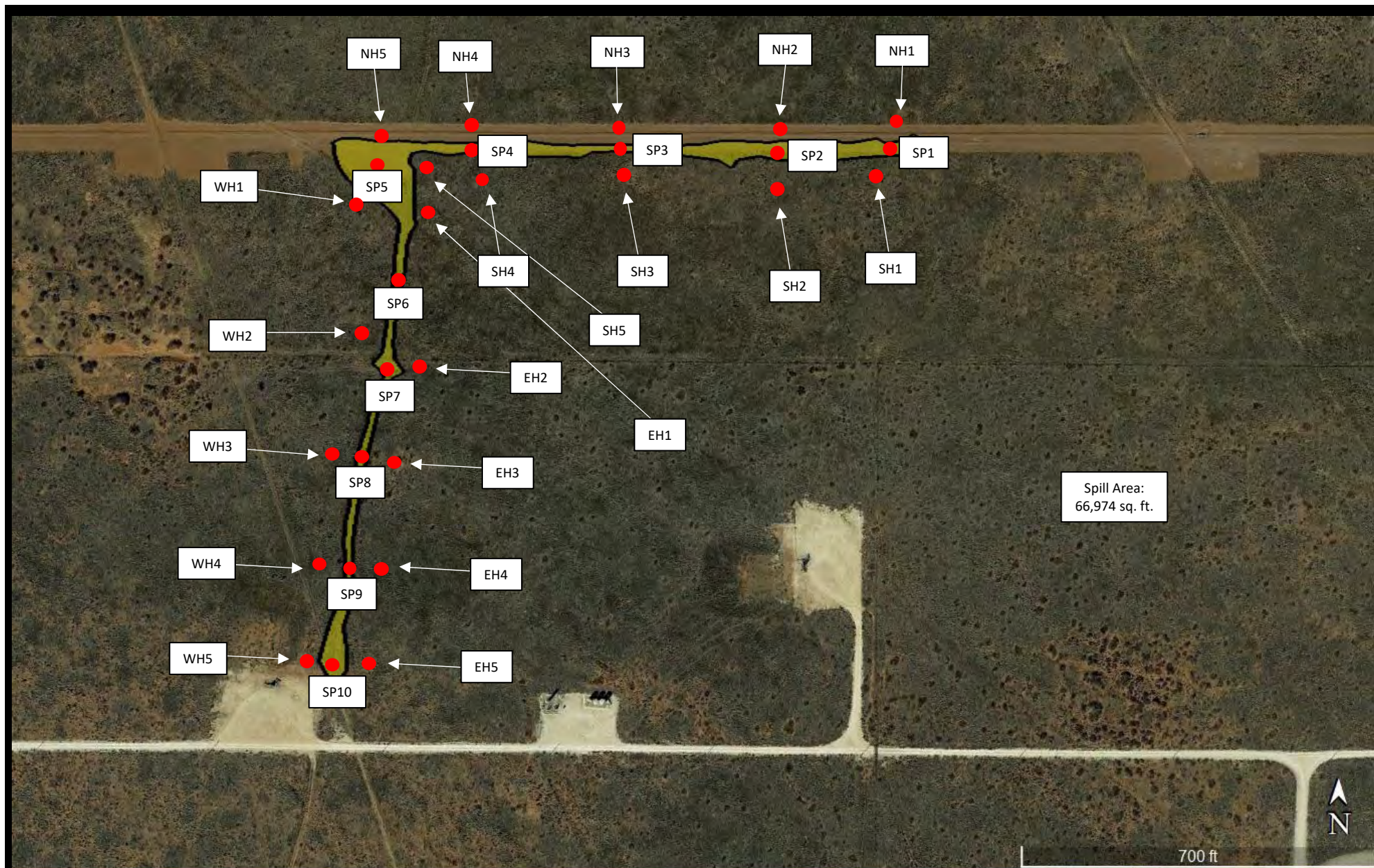
Drafted: lc

Checked: jwl

Date:

3/18/20





## Legend:

- Sample Point
- Affected Area
- Buried Pipeline

**Figure 4**

Site & Sample Location Map (Delineation)  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223 Lea County

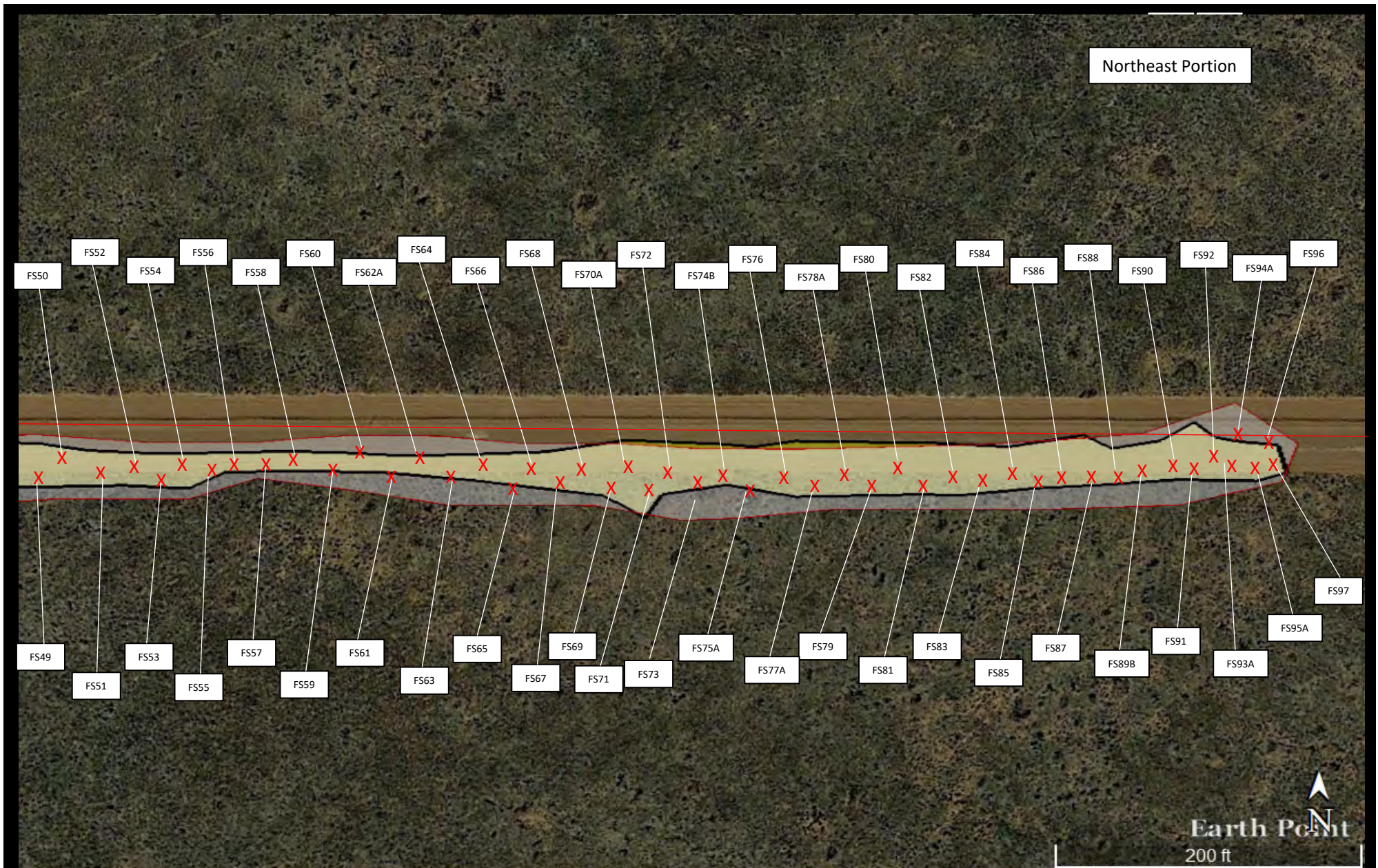


Drafted: lc

Checked: jwl

Date: 12/9/19





**Legend:**

- X Composite Sample Location
- Affected Area
- Buried Pipeline
- Excavated Area

**Figure 5a**  
 Site & Sample Location Map  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223  
 Lea County



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**Legend:**

- X Composite Sample Location
- Yellow Oval Affected Area
- Red Line Buried Pipeline
- Red Outline Excavated Area

**Figure 5b**  
 Site & Sample Location Map  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223  
 Lea County

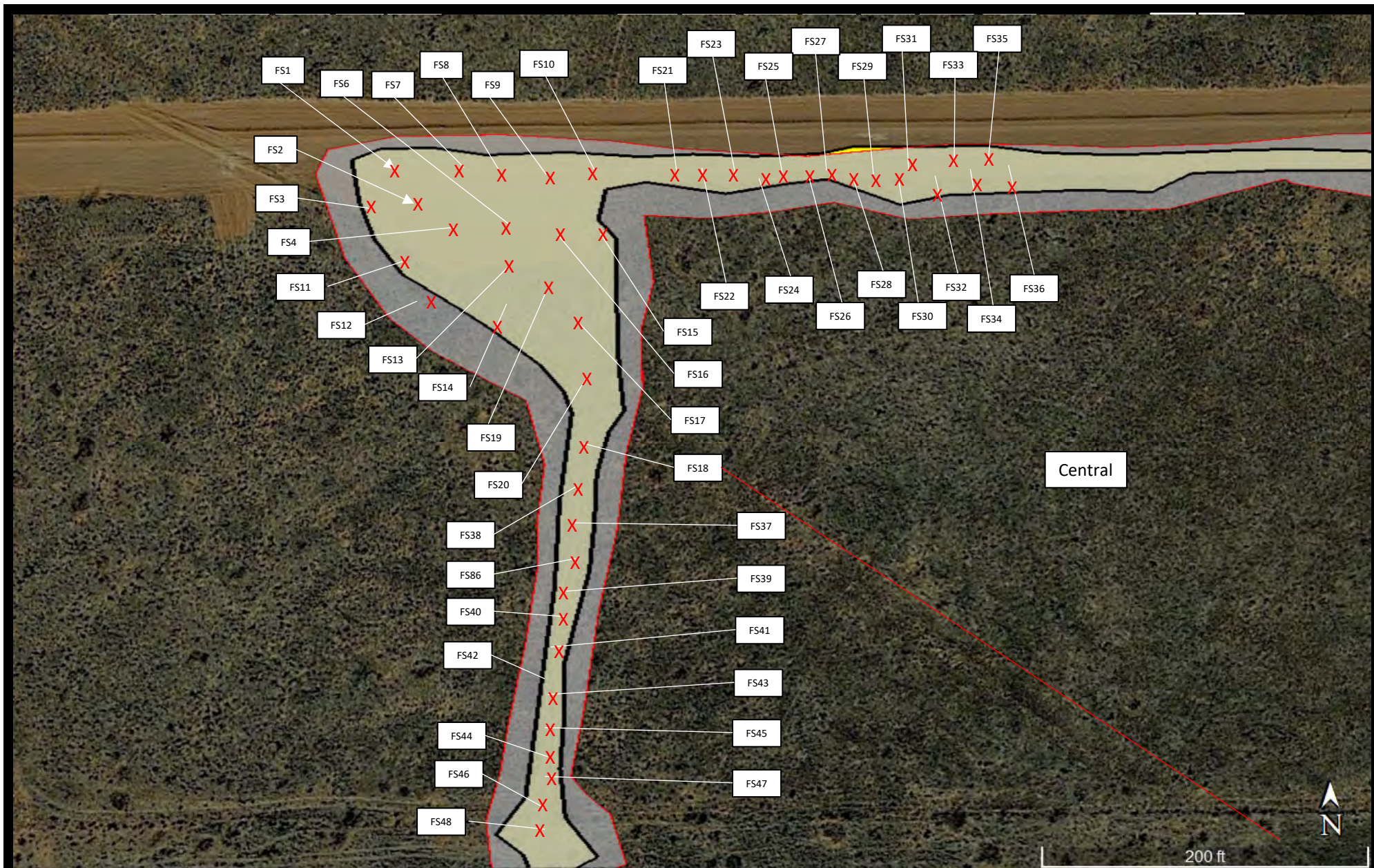
**eTECH**  
 Environmental & Safety Solutions, Inc.

Drafted: lc

Checked: jwl

Date: 3/19/20





**Legend:**

- X Composite Sample Location
- Affected Area
- Buried Pipeline
- Excavated Area

**Figure 5c**  
 Site & Sample Location Map  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223  
 Lea County

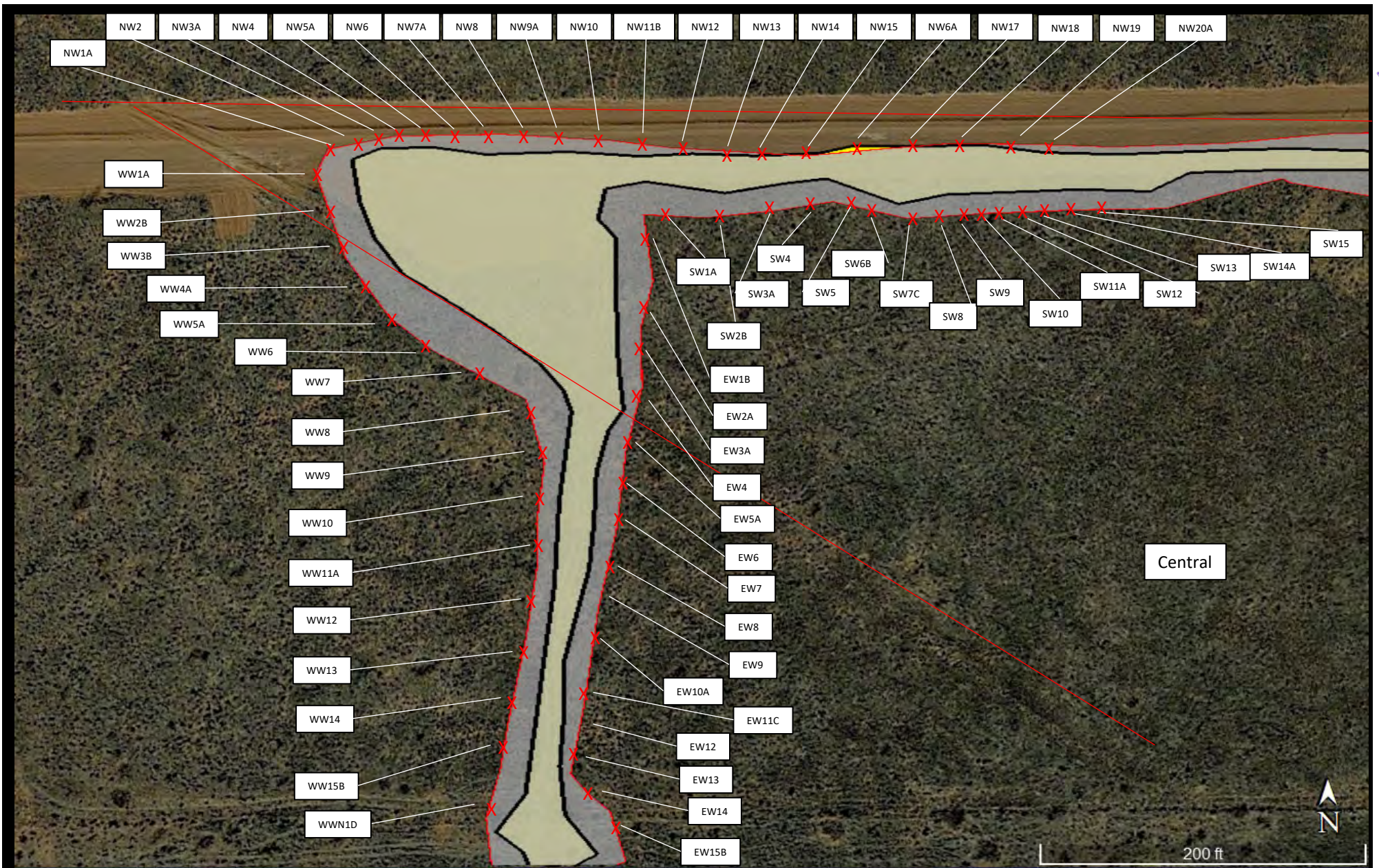
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Date: 3/19/20





**Legend:**

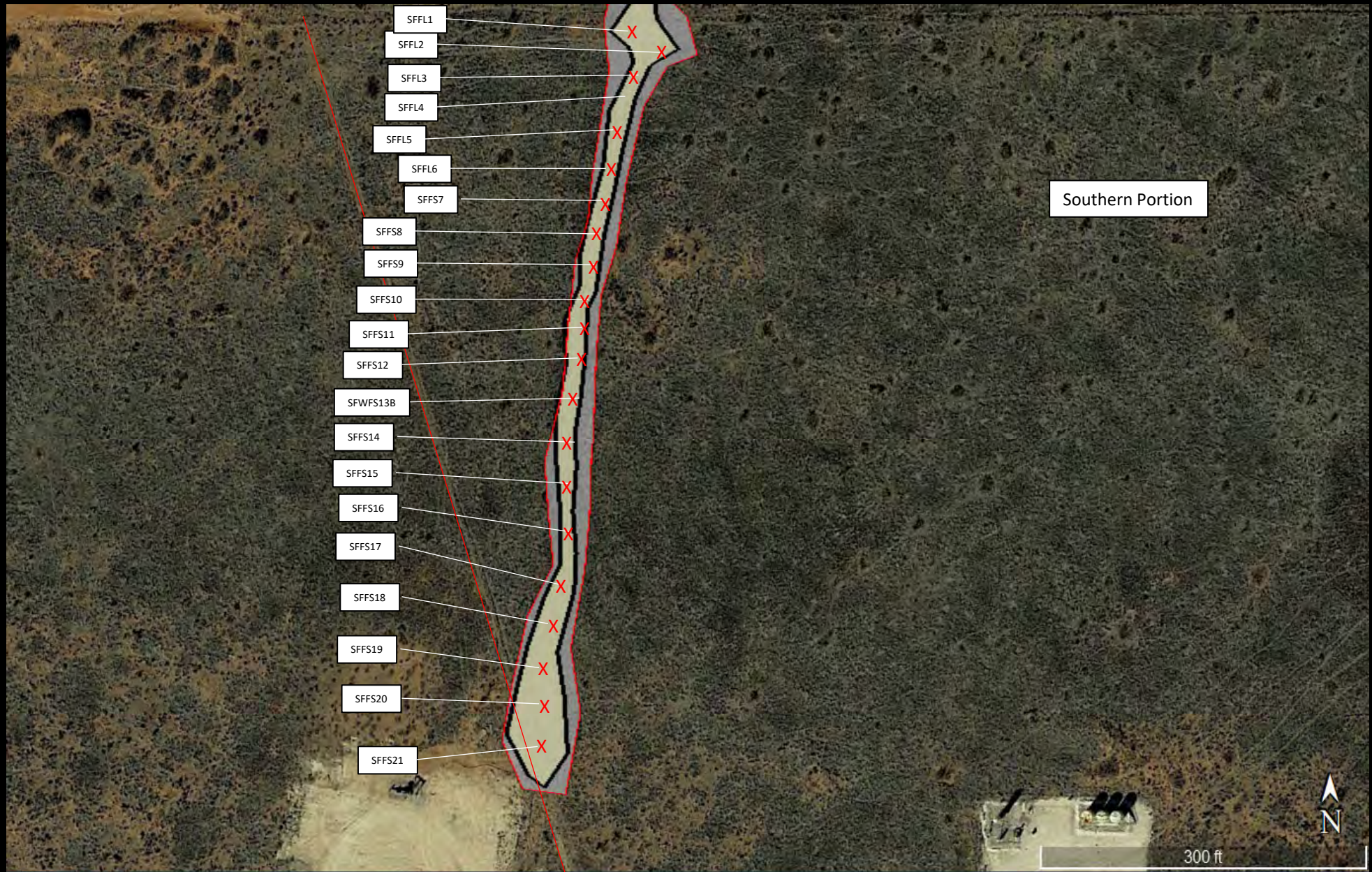
- X Composite Sample Location
- Affected Area
- Buried Pipeline
- Excavated Area

**Figure 5d**  
 Site & Sample Location Map  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223  
 Lea County



Drafted: lc      Checked: jwl      Date: 3/19/20





**Legend:**

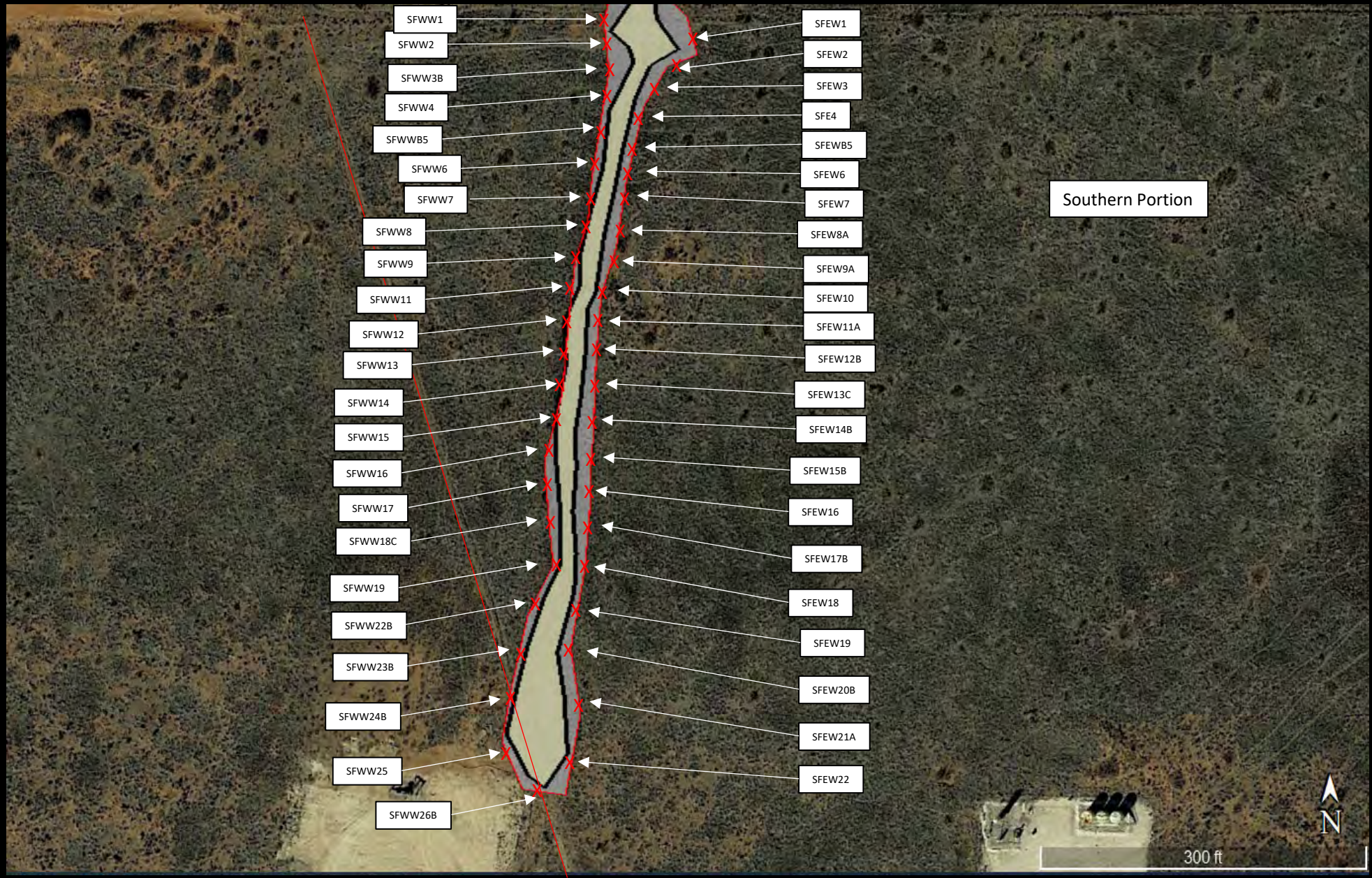
- X Composite Sample Location
- Affected Area
- Buried Pipeline
- Excavated Area

**Figure 5e**  
 Site & Sample Location Map  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223  
 Lea County



Drafted: lc      Checked: jwl      Date: 3/19/20





**Legend:**

- X Composite Sample Location
- Affected Area
- Buried Pipeline
- Excavated Area

**Figure 5f**  
 Site & Sample Location Map  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223  
 Lea County

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

Drafted: lc
Checked: jwl
Date: 3/19/20

**Tables**



**TABLE 1a**  
**CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL (Delineation)**  
**Goodnight Midstream Permian, LLC**  
**Wrigley to Piper Pipeline**  
**NMOCD Ref. #: 1RP-pending**

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <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	11/12/2019	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<b>5,360</b>
SP1	11/15/2019	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
SP2	11/12/2019	Surf	Excavated	<0.050	0.44	<10.0	11.3	11.3	<10.0	11.3	<b>5,760</b>
SP2	11/15/2019	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SP3	11/12/2019	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<b>3,600</b>
SP3	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SP4	11/12/2019	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<b>6,480</b>
SP4	11/12/2019	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
SP5	11/12/2019	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<b>18,200</b>
SP5	11/15/2019	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
SP6	11/12/2019	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<b>8,000</b>
SP6	11/15/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,680
SP6	11/15/2019	5'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,550
SP7	11/12/2019	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	13.9	13.9	<b>8,640</b>
SP7	11/15/2019	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SP8	11/12/2019	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<b>13,600</b>
SP8	11/15/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	592
SP9	11/12/2019	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	12.0	12.0	<b>10,000</b>
SP9	11/15/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,760
SP9	11/15/2019	5'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	6,080
SP10	11/12/2019	Surf	Excavated	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<b>8,660</b>
SP10	11/15/2019	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
NH1	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NH1	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NH2	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NH2	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NH3	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NH3	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NH4	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NH4	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NH5	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NH5	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EH1	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EH1	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EH2	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
EH2	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
<b>NMOCD Relcamation Standard</b>				<b>10</b>	<b>50</b>	-	-	-	-	<b>100</b>	<b>600</b>
<b>NMOCD Closure Criteria</b>				<b>10</b>	<b>50</b>	-	-	<b>1,000</b>	-	<b>2,500</b>	<b>20,000</b>

NOTES:

- =

Bold text denotes a concentration that exceeds the NMOCD Reclamation Standard and/or Closure Criteria

**TABLE 1a**  
**CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL (Delineation)**  
**Goodnight Midstream Permian, LLC**  
**Wrigley to Piper Pipeline**  
**NMOCD Ref. #: 1RP-pending**

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <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)
EH3	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EH3	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EH4	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EH4	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EH5	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EH5	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SH1	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SH1	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SH2	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SH2	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SH3	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SH3	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SH4	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SH4	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SH5	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SH5	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WH1	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WH1	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WH2	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WH2	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WH3	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WH3	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WH4	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
WH4	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WH5	11/12/2019	Surf	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WH5	11/12/2019	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
<b>NMOCD Relcamation Standard</b>				<b>10</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100</b>	<b>600</b>
<b>NMOCD Closure Criteria</b>				<b>10</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>1,000</b>	<b>-</b>	<b>2,500</b>	<b>20,000</b>

NOTES:

- =

**Bold** text denotes a concentration that exceeds the NMOCD Reclamation Standard and/or Closure Criteria

TABLE 1b CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL (Confirmation) Goodnight Midstream Permian, LLC Wrigley to Piper Pipeline NMOCD Ref. #: 1RP-pending											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl/E300
				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)
FS1	12/2/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,390
FS2	12/2/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,570
FS3	12/2/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,040
FS4	12/2/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	896
FS5	12/3/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,040
FS6	12/3/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	736
FS7	12/3/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,900
FS8	12/3/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,620
FS9	12/3/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	864
FS10	12/3/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	976
FS11	12/5/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,080
FS12	12/5/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,070
FS13	12/5/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,460
FS14	12/5/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	13.9	13.9	1,780
FS15	12/5/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,280
FS16	12/5/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,840
FS17	12/6/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FS18	12/6/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	12.0	12.0	2,680
FS19	12/6/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
FS20	12/6/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,500
FS21	12/6/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,180
FS22	12/6/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	5,160
FS23	12/6/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,160
FS24	12/6/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,120
FS25	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,600
FS26	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,920
FS27	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,980
FS28	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,400
FS29	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,920
FS30	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	3,120
FS31	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,720
FS32	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,440
FS33	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FS34	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	272
FS35	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
FS36	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	848
FS37	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	400
FS38	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
FS39	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FS40	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	4,520
FS41	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS42	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FS43	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	368
FS44	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FS45	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FS46	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	592
FS47	12/9/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	448
FS48	12/10/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
FS49	12/10/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	1,730
FS50	12/10/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
FS51	12/10/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	608
FS52	12/10/20	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	2,400
FS53	12/10/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
FS54	12/10/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	320
FS55	12/10/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
FS56	12/10/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
FS57	12/10/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112

Note: **Bold Text** denotes a concentration that exceeds the NMOCD Reclamation Standard and/or Closure Criteria



TABLE 1b CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL (Confirmation) Goodnight Midstream Permian, LLC Wrigley to Piper Pipeline NMOCD Ref. #: 1RP-pending											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl/E300
				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)
FS58	12/10/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS59	12/10/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FS60	12/10/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
FS61	12/10/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
FS62A	12/11/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
FS63	12/11/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FS64	12/11/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS65	12/11/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS66	12/11/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
FS67	12/11/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	13.9	13.9	48.0
FS68	12/11/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	128
FS69	12/11/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS70A	12/12/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FS71	12/12/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	12.0	12.0	48.0
FS72	12/12/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
FS73	12/12/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
FS74B	12/12/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
FS75A	12/12/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FS76	12/12/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
FS77A	12/12/20	3'	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
FS78A	12/16/19	4'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	120
FS79	12/16/19	4'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	2,600
FS80	12/17/19	4'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	573
FS81	12/17/19	4'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,130
FS82	12/17/19	4'	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	245
FS83	12/17/19	4'	In-Situ	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	605
FS84	12/17/19	4'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	490
FS85	12/17/19	3'	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	525
FS86	12/18/19	3'	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	90.2
FS87	12/18/19	3'	In-Situ	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	97.5
FS88	12/18/19	3'	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	52.1
FS89B	12/18/19	3'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	9.54
FS90	12/18/19	3'	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	204
FS91	12/18/19	3'	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	80.3
FS92	12/18/19	3'	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	22.1
FS 93A	12/19/19	3'	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	16.0
FS 94A	12/19/19	3'	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	118
FS95A	12/19/19	3'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	63.4
FS 96	12/19/19	4'	In-Situ	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	906
FS 97	12/19/19	3'	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	112
SFFL1	12/30/19	3'	In-Situ	<0.0186	<0.0186	<50.0	<50.0	<50.0	<50.0	<50.0	37.0
SFFL2	12/30/19	3'	In-Situ	<0.0188	<0.0188	<49.9	<49.9	<49.9	<49.9	<49.9	576
SFFL3	12/31/19	3'	In-Situ	<0.0180	<0.0180	<49.9	<49.9	<49.9	<49.9	<49.9	445
SFFL4	12/31/19	3'	In-Situ	<0.0197	<0.0197	<50.0	<50.0	<50.0	<50.0	<50.0	202
SFFL5	1/2/20	4'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	2,060
SFFL6	1/2/20	4'	In-Situ	<0.00202	<0.00202	65.9	<50.0	65.9	<50.0	65.9	250
SFFS7	1/3/20	4'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,170
SFFS8	1/3/20	4'	In-Situ	<0.00202	<0.00202	56.30	<49.9	56.30	<49.9	56.30	1,930
SFFS9	1/3/20	4'	In-Situ	<0.00193	<0.00193	<50.0	<50.0	<50.0	<50.0	<50.0	3,750
SFFS10	1/3/20	4'	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	2,910
SFFS11	1/6/20	4'	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	3,650
SFFS12	1/6/20	3'	In-Situ	<0.00193	<0.00193	<50.0	<50.0	<50.0	<50.0	<50.0	9.99
SFF13B	1/6/20	3'	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	29.3
SFFS14	1/6/20	3'	In-Situ	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	<4.99
SFFS15	1/6/20	4'	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	4,520
SFFS16	1/6/20	4'	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	2,420
SFFS17	1/6/20	4'	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	22.4

Note: **Bold Text** denotes a concentration that exceeds the NMOCD Reclamation Standard and/or Closure Criteria

TABLE 1b CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL (Confirmation) Goodnight Midstream Permian, LLC Wrigley to Piper Pipeline NMOCD Ref. #: 1RP-pending											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl/E300
				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)
SFFS18	1/8/20	4'	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	4,650
SFFS19	1/8/20	4'	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	4,160
SFFS20	1/9/20	4'	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	4,680
SFFS21	1/9/20	4'	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	4,240
WW1A	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WW2B	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
WW3B	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
WW4A	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
WW5A	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
WW6	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
WW7	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
WW8	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
WW9	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
WW10	12/3/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
WW11A	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
WW12	12/31/19	-	In-Situ	<0.0198	<0.0198	<50.0	<50.0	<50.0	<50.0	<50.0	12.0
WW13	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
WW14	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
WW15B	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	12.0	12.0	272
WWN1D	12/17/19	-	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<99.6	<49.8	<49.8	31.6
SFWW1	12/30/19	-	In-Situ	<0.0198	<0.0198	<49.9	<49.9	<49.9	<49.9	<49.9	<4.95
SFWW2	12/30/19	-	In-Situ	<0.0200	<0.0200	<50.0	<50.0	<50.0	<50.0	<50.0	482
SFWW3	12/31/19	-	Excavated	<0.0182	<0.0182	<49.8	<49.8	<49.8	<49.8	<49.8	1,380
SFWW3B	12/31/20	-	In-Situ	-	-	-	-	-	-	-	<4.99
SFWW4	12/31/20	-	In-Situ	<0.0171	<0.0171	<50.0	<50.0	<50.0	<50.0	<50.0	103
SFWWB5	1/2/20	-	In-Situ	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	<4.98
SFWW6	1/2/20	-	In-Situ	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	<5.04
SFWW7	1/3/20	-	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	172
SFWW8	1/3/20	-	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	20.0
SFWW9	1/3/20	-	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	36.0
SFWW11	1/6/20	-	In-Situ	<0.00193	<0.00193	<50.0	<50.0	<50.0	<50.0	<50.0	<4.95
SFWW12	1/6/20	-	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<5.00
SFWW13	1/6/20	-	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	<5.05
SFWW14	1/6/20	-	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	18.8
SFWW15	1/6/20	-	In-Situ	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	6.85
SFWW16	1/6/20	-	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	36.6
SFWW17	1/6/20	-	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	6.44
SFWW18C	1/8/20	-	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	<4.99
SFWW19	1/8/20	-	In-Situ	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	<5.00
SFWW22B	1/13/20	-	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	56.7
SFWW23B	1/13/20	-	In-Situ	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	7.92
SFWW24B	1/13/20	-	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	<4.96
SFWW25	1/13/20	-	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	<4.98
SFWW26B	1/13/20	-	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	235
NW1A	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
NW2	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
NW3A	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
NW4	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	352
NW5A	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
NW6	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	400
NW7A	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	272
NW8	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
NW9A	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
NW10	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
NW11B	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
NW12	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
NW13	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144

Note: **Bold Text** denotes a concentration that exceeds the NMOCD Reclamation Standard and/or Closure Criteria

TABLE 1b CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL (Confirmation) Goodnight Midstream Permian, LLC Wrigley to Piper Pipeline NMOCD Ref. #: 1RP-pending											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl/E300
				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)
NW14	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	304
NW15	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	224
NW16A	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
NW17	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
NW18	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
NW19	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	144
NW20A	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NW21	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
NW22	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	240
NW23A	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
NW24	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NW25	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
NW26	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
NW27	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
NW28A	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NW29	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
NW30	12/16/19	-	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	125
NW30F	12/17/19	-	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	7.43
NW31A	12/17/19	-	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	7.39
NW32	12/17/19	-	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	15.7
NW33	12/17/19	-	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	20.1
NW34	12/17/19	-	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	22.0
NW35	12/18/19	-	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	67.6
NW36	12/18/19	-	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	77.6
NW37A	12/18/19	-	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	84.4
NW38	12/18/19	-	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	55.2
NW39	12/18/19	-	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	5.34
NW 40A	12/19/19	-	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	23.3
NW 41	12/19/19	-	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	75.9
NW42A	2/3/20	-	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	8.15
NW43B	2/3/20	-	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	7.61
NW44B	2/3/20	-	Excavated	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	631
NW44C	2/6/20	-	In-Situ	-	-	-	-	-	-	-	<5.01
NW45A	2/3/20	-	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	50.6
SW1A	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW2B	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SW3A	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SW4	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SW5	12/5/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
SW6B	12/5/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW7C	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW8	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW9	12/9/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	112
SW10	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW11A	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW12	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW13	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
SW14A	12/10/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
SW15	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
SW16	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
SW17	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	80.0
SW18	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	208
SW19A	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW20	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SW21	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	192
SW22	12/11/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW23	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0

Note: **Bold Text** denotes a concentration that exceeds the NMOCD Reclamation Standard and/or Closure Criteria

TABLE 1b CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL (Confirmation) Goodnight Midstream Permian, LLC Wrigley to Piper Pipeline NMOCD Ref. #: 1RP-pending											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl/E300
				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)
SW24	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
SW25	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	13.9	13.9	32.0
SW26A	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
SW27	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
SW28	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	64.0
SW29A	12/12/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	12.0	12.0	16.0
SW31	12/17/19	-	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	<5.02
SW32	12/17/19	-	In-Situ	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	85.1
SW33	12/17/19	-	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	27.6
SW34	12/17/19	-	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	151
SW35	12/18/19	-	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	248
SW36A	12/18/19	-	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	63.0
SW37	12/18/19	-	In-Situ	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	9.15
SW38B	12/18/19	-	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	15.1
SW39	12/18/19	-	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	9.94
SW 40	12/19/19	-	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	247
SW41A	12/19/19	-	In-Situ	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	243
SW 42	12/19/19	-	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	37.9
EW1B	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EW2A	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	304
EW3A	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	48.0
EW4	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	96.0
EW5A	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	368
EW6	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	304
EW7	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
EW8	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	16.0
EW9	12/5/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
EW10A	12/5/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	160
EW11C	12/5/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	32.0
EW12	12/5/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EW13	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EW14	12/4/20	-	In-Situ	<0.050	<0.300	<10.0	<10.0	<20.0	<10.0	<30.0	<16.0
EW15	12/30/20	-	Excavated	<0.0195	<0.0195	<49.9	<49.9	<49.9	<49.9	<49.9	823
EW15B	1/22/20	-	In-Situ	-	-	-	-	-	-	-	<5.0
EWN1	12/17/19	-	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	8.93
EWN2	2/3/20	-	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	22.4
SFEW1	12/30/20	-	In-Situ	<0.0196	<0.0196	<50.0	<50.0	<50.0	<50.0	<50.0	6.16
SFEW2	12/30/20	-	In-Situ	<0.0174	<0.0174	<49.8	<49.8	<49.8	<49.8	<49.8	<4.97
SFEW3	12/31/20	-	In-Situ	<0.0171	<0.0171	<49.9	<49.9	<49.9	<49.9	<49.9	193
SFE4	12/31/20	-	In-Situ	<0.0195	<0.0195	<50.0	<50.0	<50.0	<50.0	<50.0	18.1
SFEWB5	1/2/20	-	In-Situ	<0.00200	<0.00200	65.8	<49.9	65.8	<49.9	65.8	<5.03
SFEW6	1/2/20	-	In-Situ	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	<4.96
SFEW7	1/3/20	-	In-Situ	<0.00244	<0.00244	<49.9	<49.9	<49.9	<49.9	<49.9	42.5
SFEW8A	1/3/20	-	In-Situ	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	10.1
SFEW9A	1/3/20	-	In-Situ	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	<5.00
SFEW10	1/3/20	-	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	37.3
SFEW11A	1/6/20	-	In-Situ	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	6.46
SFEW12	1/6/20	-	Excavated	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	3,190
SFEW12B	1/22/20	-	In-Situ	-	-	-	-	-	-	-	<5.03
SFEW13C	1/6/20	-	In-Situ	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	10.9
SFEW14	1/6/20	-	Excavated	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	3,210
SFEW14B	1/22/20	-	In-Situ	-	-	-	-	-	-	-	119
SFEW15B	1/6/20	-	In-Situ	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	<5.01
SFEW16	1/6/20	-	In-Situ	<0.00193	<0.00193	<50.0	<50.0	<50.0	<50.0	<50.0	12.1
SFEW17	1/6/20	-	Excavated	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	2,990
SFEW17B	1/22/20	-	In-Situ	-	-	-	-	-	-	-	<5.0
SFEW18	1/18/20	-	In-Situ	-	-	-	-	-	-	-	<4.95

Note: **Bold Text** denotes a concentration that exceeds the NMOCD Reclamation Standard and/or Closure Criteria

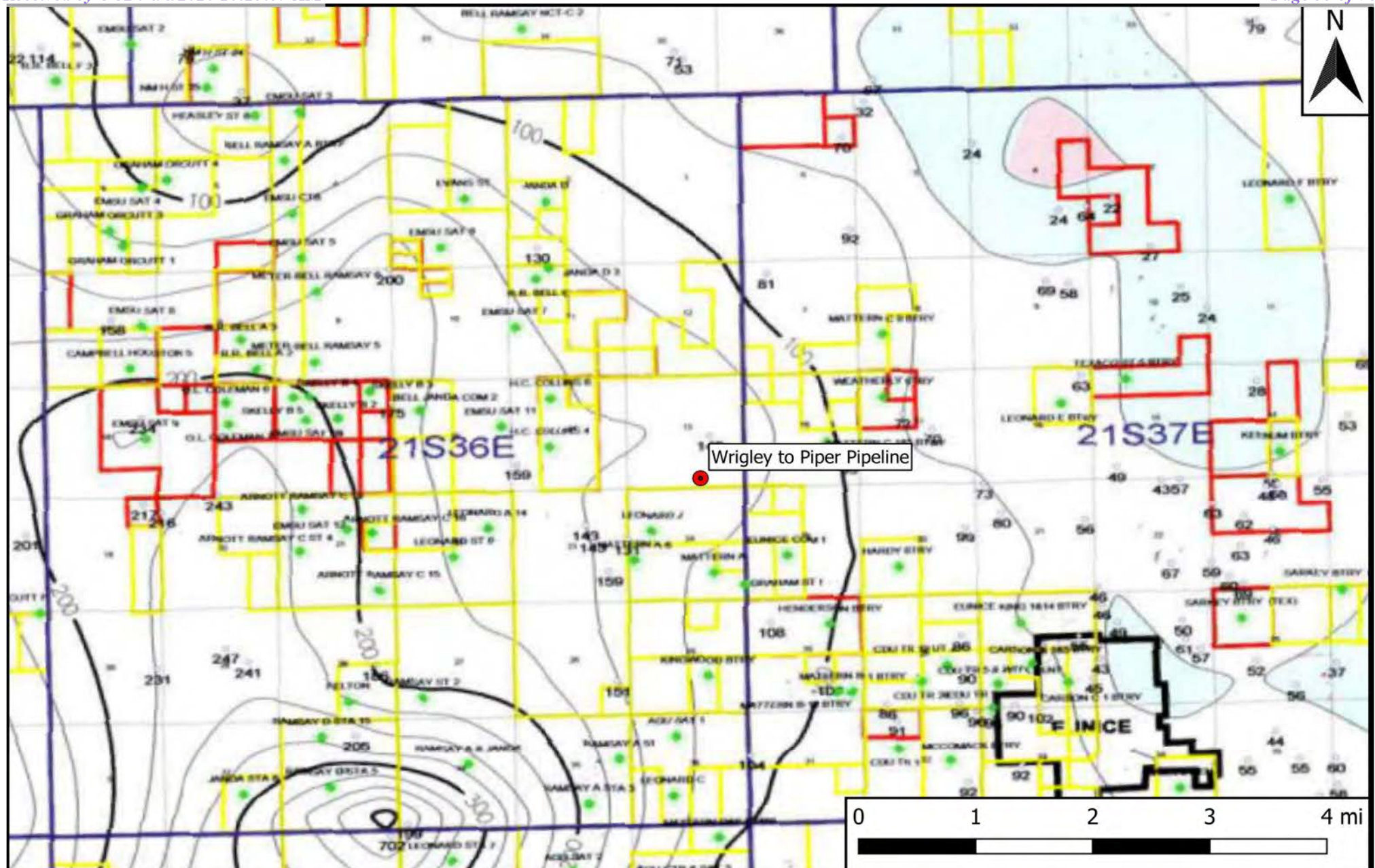
TABLE 1b CONCENTRATIONS OF BENZENE, BTEX TPH AND CHLORIDE IN SOIL (Confirmation) Goodnight Midstream Permian, LLC Wrigley to Piper Pipeline NMOCD Ref. #: 1RP-pending											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl/E300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</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)
SFEW19	1/8/20	-	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	195
SFEW20B	1/8/20	-	In-Situ	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	<5.03
SFEW21A	1/9/20	-	In-Situ	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	<4.98
SFEW22	1/9/20	-	In-Situ	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	68.4
NMOCD Relcamation Standard				10	50	-	-	-	-	100	600
NMOCD Closure Criteria				10	50	-	-	1,000	-	2,500	20000

Note: **Bold Text** denotes a concentration that exceeds the NMOCD Reclamation Standard and/or Closure Criteria

## **Appendix A**

### **Depth to Groundwater Information**





## Legend

● Site Location

Figure 4

Inferred Depth to Groundwater Trend Map  
 Goodnight Midstream Permian, LLC  
 Wrigley to Piper Pipeline  
 GPS: 32.472852, -103.217223  
 Lea County

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

Drafted: mag

Checked: jwl

Date: 11/11/19



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">CP 00446 POD1</a>	CP	LE	1	4	4	13	21S	36E	667871	3594424*		379	185	148	37
<a href="#">CP 00446 POD2</a>	CP	LE	1	4	4	13	21S	36E	667871	3594424*		379	200	151	49
<a href="#">CP 01245 POD1</a>	CP	LE			4	18	21S	37E	668676	3594411		1152	220		
<a href="#">CP 00472 POD1</a>	CP	LE	4	4	2	23	21S	36E	666480	3593391*		1359	200	140	60
<a href="#">CP 00472 POD2</a>	CP	LE	4	4	2	23	21S	36E	666480	3593391*		1359	200	140	60
<a href="#">CP 00664</a>	CP	LE			2	23	21S	36E	666179	3593687*		1467	185	150	35
<a href="#">CP 00882</a>	CP	LE			2	23	21S	36E	666179	3593687*		1467	195	142	53
<a href="#">CP 00472 POD5</a>	CP	LE	2	3	2	23	21S	36E	666077	3593585*		1601	200	143	57

Average Depth to Water: **144 feet**

Minimum Depth: **140 feet**

Maximum Depth: **151 feet**

**Record Count:** 8

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 667534.4

**Northing (Y):** 3594249.4

**Radius:** 1610

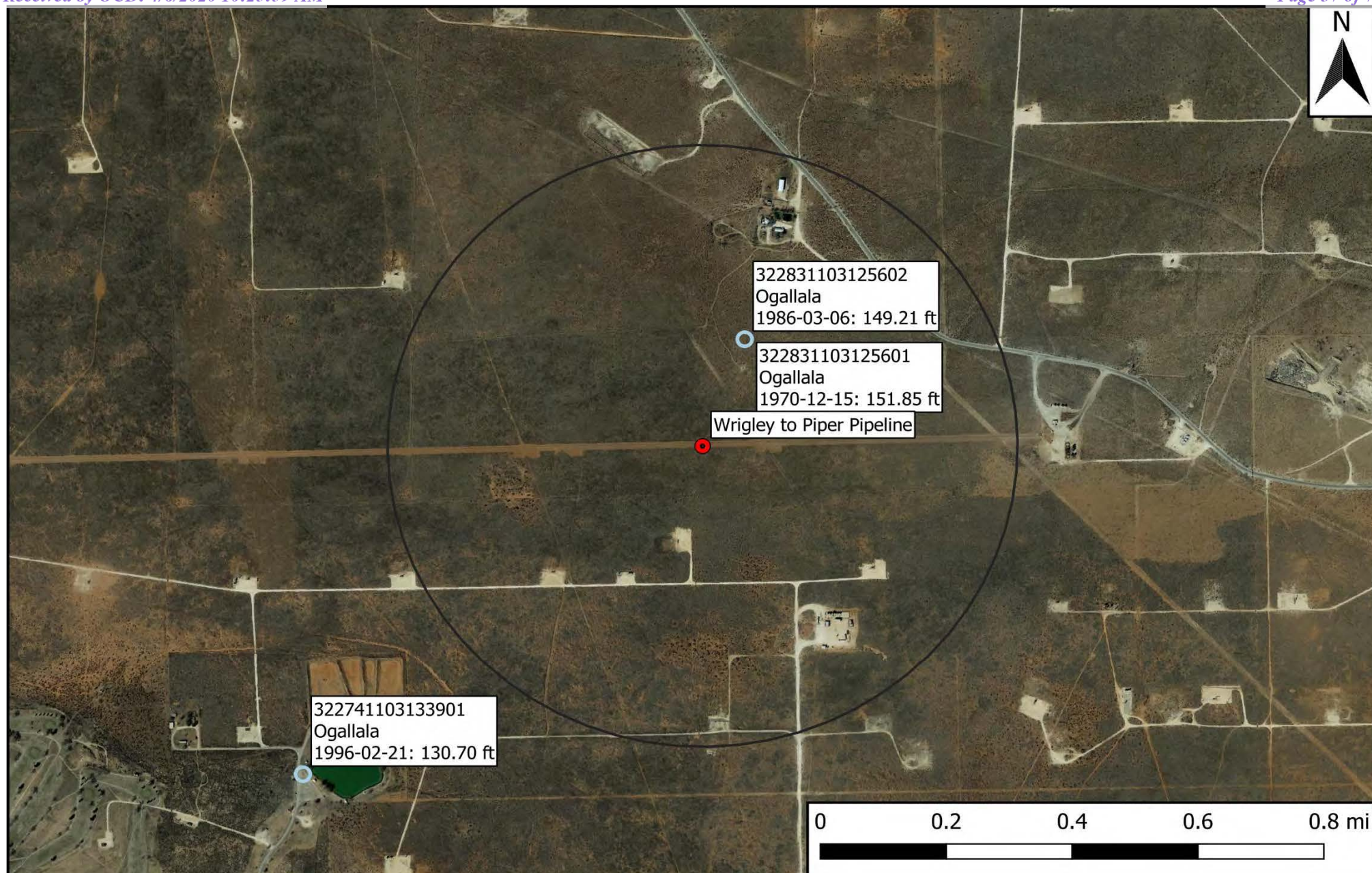
\*UTM location was derived from PLSS - see Help

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.

3/19/20 6:57 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER





## Legend

- Site Location
- Well - USGS

## Figure 5

USGS Well Proximity Map  
Goodnight Midstream Permian, LLC  
Wrigley to Piper Pipeline  
GPS: 32.472852, -103.217223  
Lea County



Drafted: mag

Checked: jwl

Date: 11/11/19



# 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 =

- 322831103125601

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

## USGS 322831103125601 21S.36E.13.41223

Available data for this site 

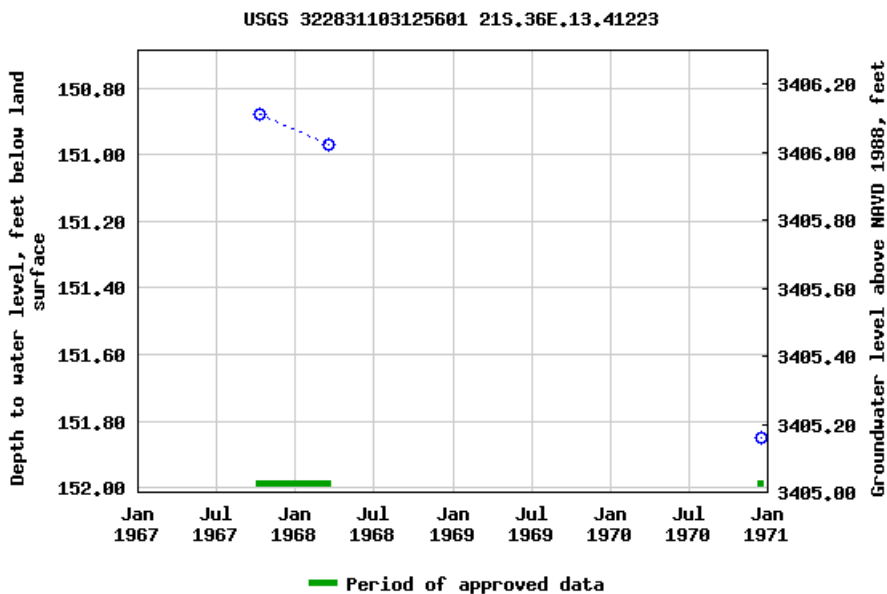
Groundwater: Field measurements ▼

GO

Lea County, New Mexico  
Hydrologic Unit Code 13070007  
Latitude 32°28'31", Longitude 103°12'56" NAD27  
Land-surface elevation 3,557 feet above NAVD88  
The depth of the well is 200 feet below land surface.  
This well is completed in the Ogallala Formation (121OGLL) 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.

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

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



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

Page Last Modified: 2019-11-11 10:23:42 EST

0.5 0.45 nadww02



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# 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 =

- 322831103125602

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

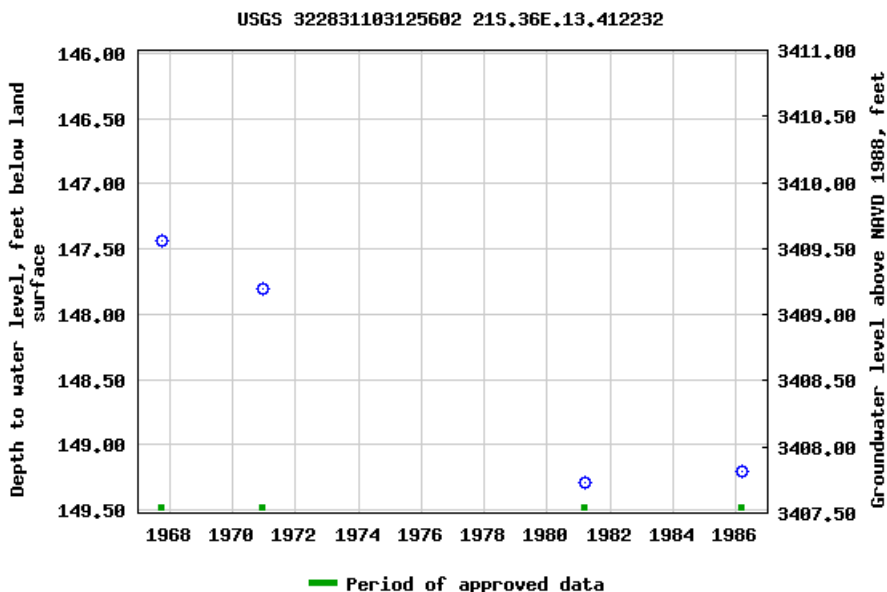
## USGS 322831103125602 21S.36E.13.412232

Available data for this site Groundwater: Field measurements GO

Lea County, New Mexico  
Hydrologic Unit Code 13070007  
Latitude 32°28'31", Longitude 103°12'56" NAD27  
Land-surface elevation 3,557 feet above NAVD88  
The depth of the well is 185 feet below land surface.  
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

### Output formats

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



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

Download a presentation-quality graph



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

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



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

Page Last Modified: 2019-11-11 10:23:43 EST

0.49 0.44 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 =

- 322741103133901

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

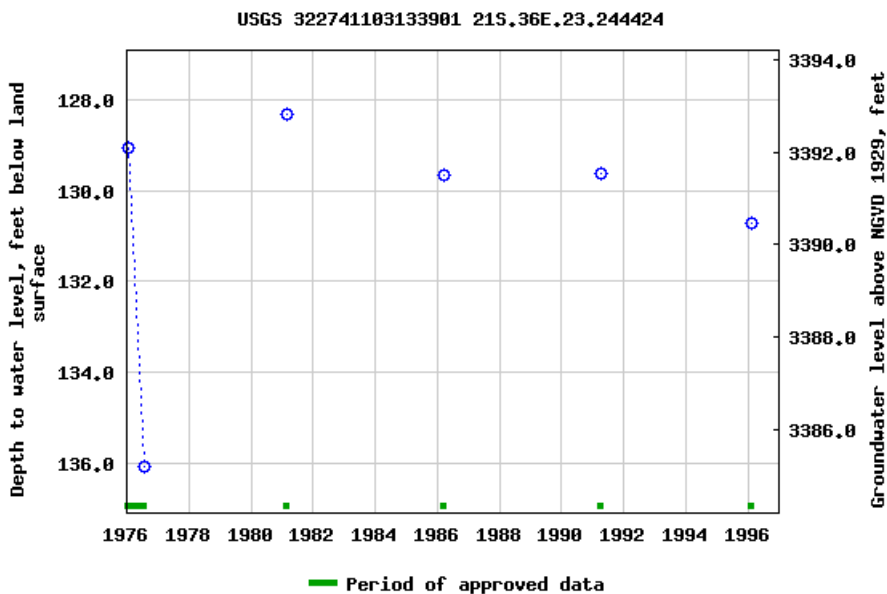
## USGS 322741103133901 21S.36E.23.244424

Available data for this site Groundwater: Field measurements GO

Lea County, New Mexico  
Hydrologic Unit Code 13070007  
Latitude 32°27'54", Longitude 103°13'40" NAD27  
Land-surface elevation 3,521.20 feet above NGVD29  
The depth of the well is 200 feet below land surface.  
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

### Output formats

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



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

[Download a presentation-quality graph](#)

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

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



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

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0.51 0.45 nadww02

## **Appendix B**

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





## Initial Release Assessment Form

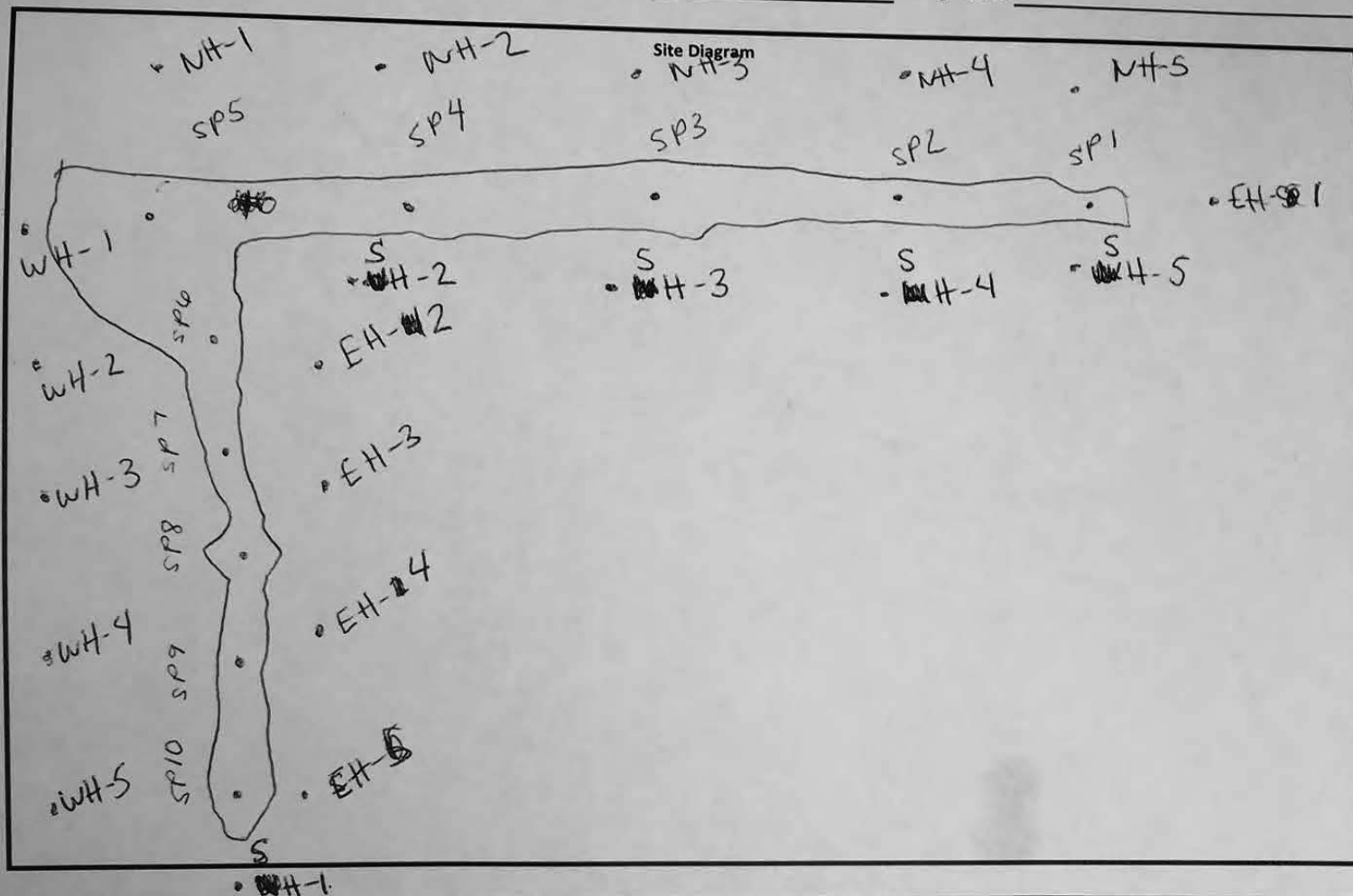
Project: Wrigley to piperDate: 11.12.19

Project Number: \_\_\_\_\_

Clean Up Level: \_\_\_\_\_

Latitude: \_\_\_\_\_

Longitude: \_\_\_\_\_



Notes:

~Length:

~Width:

~Area:

~Depth:

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?

☐☐☐☐☐☐☐☐128  
156



## Sample Log

Date: 11.12.19

Project: Wigley to piper

Project Number: \_\_\_\_\_

Latitude: \_\_\_\_\_

Longitude: \_\_\_\_\_

Sample ID	PID/Odor	Chloride Conc.	GPS
SP-1 @ Surface		2472 5,316	
SP-1 @ 1'		2472 5,316	
SP-1 @ 2'		Auger refusal	
SP-2 @ Surface		2472 4904	
SP-2 @ 1'		2472 4904	
SP-2 @ 2'		2472 4904	
SP-8 @ Surface		2492 8776	
SP-8 @ 1'		2492 8776	
SP-8 @ 2'		2492 5316	
SP-8 @ 3'		Auger refusal	
SP-9 @ Surface		2492 6796	
SP-9 @ 1'		2492 6796	
SP-9 @ 2'		2492 6,260	
SP-9 @ 3'		Auger refusal	
SP-10 @ Surface		2492 14004	
SP-10 @ 1'		2492 8776	
SP-10 @ 2'		2492 6,796	
SP-10 @ 3'		Auger refusal	
SP-7 @ Surface		2492 10496	
SP-7 @ 1'		2492 1,392	
SP-7 @ 2'		2492 6,796	
SP-6 @ Surface		2492 10,496	
SP-6 @ 1'		2492 6260	
SP-6 @ 2'		2492 4,176	
SP-5 @ Surface		2492 17296	
SP-5 @ 1'		2492 5768	
SP-5 @ 2'		Auger refusal	
SP-4 @ Surface		2492 7392	
SP-4 @ 1'		312	
SP-4 @ 2'		312	
SP-3 @ Surface		2492 4524	
SP-3 @ 1'		128	
SP-3 @ 2'		180	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas

Handwritten notes:

SP-1 @ 1' = 5,316

SP-1 @ 2' = 5,316

SP-1 @ 3' = 5,316

SP-1 @ 4' = 5,316

SP-1 @ 5' = 5,316

SP-1 @ 6' = 5,316

SP-1 @ 7' = 5,316

SP-1 @ 8' = 5,316

SP-1 @ 9' = 5,316

SP-1 @ 10' = 5,316

SP-1 @ 11' = 5,316

SP-1 @ 12' = 5,316

SP-1 @ 13' = 5,316

SP-1 @ 14' = 5,316

SP-1 @ 15' = 5,316

SP-1 @ 16' = 5,316

SP-1 @ 17' = 5,316

SP-1 @ 18' = 5,316

SP-1 @ 19' = 5,316

SP-1 @ 20' = 5,316

SP-1 @ 21' = 5,316

SP-1 @ 22' = 5,316

SP-1 @ 23' = 5,316

SP-1 @ 24' = 5,316

SP-1 @ 25' = 5,316

SP-1 @ 26' = 5,316

SP-1 @ 27' = 5,316

SP-1 @ 28' = 5,316

SP-1 @ 29' = 5,316

SP-1 @ 30' = 5,316

SP-1 @ 31' = 5,316

SP-1 @ 32' = 5,316

SP-1 @ 33' = 5,316

SP-1 @ 34' = 5,316

SP-1 @ 35' = 5,316

SP-1 @ 36' = 5,316

SP-1 @ 37' = 5,316

SP-1 @ 38' = 5,316

SP-1 @ 39' = 5,316

SP-1 @ 40' = 5,316

SP-1 @ 41' = 5,316

SP-1 @ 42' = 5,316

SP-1 @ 43' = 5,316

SP-1 @ 44' = 5,316

SP-1 @ 45' = 5,316

SP-1 @ 46' = 5,316

SP-1 @ 47' = 5,316

SP-1 @ 48' = 5,316

SP-1 @ 49' = 5,316

SP-1 @ 50' = 5,316





## Sample Log

Project: Wigley to piperDate: 11/3/19

Project Number: \_\_\_\_\_

Latitude: \_\_\_\_\_

Longitude: \_\_\_\_\_

Sample ID	PID/Odor	Chloride Conc.	GPS
WH-1CS		128	
WH-1e1		128	
NH-1CS		128	
NH-1e1		128	
WH-2CS		128	
WH-2e1		154	
EH-5CS		128	
EH-5e1		128	
EH-3CS		154	
EH-3e1		154	
EH-4CS		128	
EH-4e1		128	
EH-2CS		128	
EH-2e1		128	
EH-1CS		128	
EH-1e1		128	
<del>WH-1</del> NH-2CS		128	
<del>WH-1</del> NH-2e1		128	
WH-3CS		128	
WH-3e1		128	
WH-4CS		154	
WH-4e1		128	
WH-5CS		128	
WH-5e1		128	
SH-1CS		128	
SH-1e1		128	
SH-2CS		128	
SH-2e1		128	
SH-3CS		128	
SH-3e1		128	
SH-4CS		128	
SH-4e1		128	
SH-5CS		128	
SH-5e1		128	
NH-3CS		128	
NH-3e1		128	

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



\* 12/18/19

Date: 11-13-19

Longitude: -103.217223

### GPS Sample Points, Center of Comp Areas





Date: 11-15-19

Project Number: 11488 Latitude: 32.472852 Longitude: -103.217223

### GPS Sample Points, Center of Comp Areas



## Sample Log

Date:

11-13-19

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

[illegible]

**Sample Point = SP #1 @ ## etc**

**Floor = FL #1 etc**

**Sidewall = SW #1 etc**

Test Trench = TT #1 @ ##

**Refusal = SP #1 @ 4'-R**

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

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

**Stockpile = Stockpile #1**

### GPS Sample Points, Center of Comp Areas





### Sample Log

Date: 12-2-19

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

[illegible]

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

**Sidewall = SW #1 etc**

Test Trench = TT #1 @ ##

**Refusal = SP #1 @ 4'-R**

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

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

**Stockpile = Stockpile #1**

### GPS Sample Points, Center of Comp Areas



### Sample Log

Date: 12-3-19

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

[illegible]

**Sample Point = SP #1 @ ## etc**

**Floor = FL #1 etc**

**Sidewall = SW #1 etc**

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

**Stockpile = Stockpile #1**

### GPS Sample Points, Center of Comp Areas



## Sample Log

Date: 12-4-19

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

[illegible]

**Sample Point = SP #1 @ ## etc**

**Floor = FL #1 etc**

**Sidewall = SW #1 etc**

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

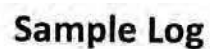
**Soil Intended to be Deferred = SP #1 @ 4' In-Situ**

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

**Stockpile = Stockpile #1**

**GPS Sample Points, Center of Comp Areas**





12-5-19

Longitude: -103.217223

### GPS Sample Points, Center of Comp Areas



## Sample Log

Date:

12/6/10

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

[illegible]

**Sample Point = SP #1 @ ## etc**

**Floor = FL #1 etc**

**Sidewall = SW #1 etc**

Test Trench = TT #1 @ ##

**Refusal = SP #1 @ 4'-R**

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

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

**Stockpile = Stockpile #1**

### GPS Sample Points, Center of Comp Areas



## Sample Log

Date:

12/9/19

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

Sample ID	PID/Odor	Chloride Conc.	GPS
NW4		512 07:45	
NW5		736 2x 8:40	
NW5a		208 09:20	
FS25		804 09:25	
FS26		1948 2x 9:30	
FS27		872 2x 9:35	
FS28		1816 9:40	
FS29		1998 9:45	
FS30		<del>2092</del> 2328 1+h 9:50	
FS31		2092 9:55	
FS32		2092 10:00	
NW6		416 10:25	
FS33		1010 10:30	
FS34		944 10:40	
FS35		616 10:50	
FS36		1188 11:30	
FS37		512 11:35	
FS38		564 11:40	
FS39		416 11:45	
FS40		3952 1+h 11:50	
NW7		736 12:05	
FS41		464 12:25	
FS42		804 12:30	
FS43		564 12:35	
NW7a		236 12:40	
NW8		464 13:30	
FS44		464 564 14:00	
FS45		132 14:05	
FS46		728 14:15	
FS47		464 14:50	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas





## Sample Log

Date:

12/10/19

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

Sample ID	PID/Odor	Chloride Conc.	GPS
FS44		512 08:36	
FS49		1948 08:35	
FS50		376 08:40	
FS51		872 08:45	
NW4		616 08:50	
NW9a		464 09:30	
FS52		2916 10:00	
FS53		464 10:05	
FS54		564 10:10	
FS55		300 10:15	
FS56		464 10:20	
FS57		464 11:05	
FS58		416 11:10	
NW10		376 11:15	
SW10		416 2x SW10 11:20	
SW11		804 11:50	
NW11		616 12:10	
FS59		416 12:15	
SW11a		300 12:20	
NW11a		736 12:35	
NW11b		512 12:45	
SW12		336 13:00	
NW12		264 13:20	
FS60		564 13:25	
SW13		512 300 13:55	
NW13		300 512 14:15	
FS61		564 14:20	
SW14		1288 14:55	
NW14		580 15:10	
FS62		1480 15:15	
SW14a		204 15:25	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

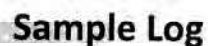
Refusal = SP #1 @ 4'-R

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



12/11/19

Longitude: -103.217223

**GPS Sample Points, Center of Comp Areas**





### Sample Log

Date: 12/12/19

Project: Wrigley to Piper Pipeline

Project Number: 11488      Latitude: 32.472852      Longitude: -103.217223

[illegible]

**Sample Point = SP #1 @ ## etc**

**Floor = FL #1 etc**

**Sidewall = SW #1 etc**

Test Trench = TT #1 @ ##

**Refusal = SP #1 @ 4'-R**

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

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

**Stockpile = Stockpile #1**

### GPS Sample Points, Center of Comp Areas





## Sample Log

Date:

12/16/19

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

FS Sample ID	PID/Odor	Chloride Conc.	GPS
FS NW 30		464 8:20	
SW 30		2416 8:25	
FS 78		1188 8:30	
SW 30a		2092 9:00	
FS 78a		616 >4' 9:30	
SW 30b		1816 9:30	
SW 30c		>2416 3012 (high) 9:55	
SW 30d		>2416 2540 (high) 12:50	
FS 79		2416 2540 74' 12:55	
SW 30e		2540 1100 13:30	
WWN 1		1580 13:35	
SW 30f WWN 1a		1276 14:30	
SW 30f		204 14:45	
WWN 1b		960 15:05	
WWN 1c		888 15:40	
<del>WWN 1d</del> 12/17/19			12/17/19
WWN 1d		388 8:00	
FS 80		888 8:30	
WWN 1 SW 31		480 9:10	
WWN 1		432 10:05	
WWN 2 NW 31		1116 11:10	
NW 31a		480 11:35	
FS 81		1288 >4' 11:40	
FS 82		480 11:45	
NW 32		204 12:10	
SW 32		344 13:00	
FS 83		1116 >4' 13:05	
SW 33		268 13:32	
NW 33		528 14:10	
FS 84		888 14:15	
NW 34		268 14:45	
SW 34		580 15:15	
FS 85		756 <4' dump 15:20	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

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

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

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas



### Sample Log

Date:

12/19/14

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

[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



Date: 12-30-19

Project Number: \_\_\_\_\_ Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

### GPS Sample Points, Center of Comp Areas





### Sample Log

Date: 12-31-19

Project: Wrigley to Piper

Project Number:

Latitude:

Longitude:

[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**



Date: 1/3/20

Latitude: 32.472852

Longitude: -103.217223

Sample Point = SP #1 @ ## etc

Test Trench = TT #1 @ ##

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

Stockpile = Stockpile #1

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

**GPS Sample Points, Center of Comp Areas**



Date:

1/6/20

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

### GPS Sample Points, Center of Comp Areas





## Sample Log

Date:

1/2/20

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

[illegible]

**Sample Point = SP #1 @ ## etc**

**Floor = FL #1 etc**

**Sidewall = SW #1 etc**

Test Trench = TT #1 @ ##

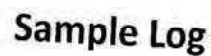
**Refusal = SP #1 @ 4'-R**

**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**



Date: 1-7-20

Project Number: W

Latitude:

Longitude: \_\_\_\_\_

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



Date: 1.08.20

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

### GPS Sample Points, Center of Comp Areas





## Sample Log

Date: 1/9/20

Project: Wrigley to Piper Pipeline

Project Number: 11488

Latitude: 32.472852

Longitude: -103.217223

[illegible]

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

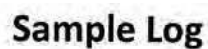
Refusal = SP #1 @ 4'-R

**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



Date: 1-13-20

Project Number: 2019-01-10 Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

### GPS Sample Points, Center of Comp Areas





## Soil Profile

Date: 11/15/2019Project: Wrigley to Piper PipelineProject Number: 11488Latitude: 32.472852Longitude: -103.217223

Depth (ft. bgs)

Description

1		Red Sand w/ Clay
2		
3		
4		
5		
6		Caliche
7	TP	
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## **Appendix C**

### **Laboratory Analytical Reports**



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

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November 20, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: WRIGLEY TO PIPER

Enclosed are the results of analyses for samples received by the laboratory on 11/14/19 14:55.

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 "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 1 @ SURFACE (H903873-01)**

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	11/15/2019	ND	1.74	86.9	2.00	5.83		
Toluene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.82		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.75	87.4	2.00	6.00		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.27	87.8	6.00	5.94		
Total BTEX	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	5360	16.0	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 87.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 2 @ SURFACE (H903873-02)**

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	11/19/2019	ND	1.74	86.9	2.00	5.83	
Toluene*	0.061	0.050	11/19/2019	ND	1.74	86.8	2.00	5.82	
Ethylbenzene*	0.080	0.050	11/19/2019	ND	1.75	87.4	2.00	6.00	
Total Xylenes*	0.296	0.150	11/19/2019	ND	5.27	87.8	6.00	5.94	
Total BTX	0.437	0.300	11/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	5760	16.0	11/18/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2019	ND	217	109	200	1.41	
DRO >C10-C28*	11.3	10.0	11/15/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 89.0 % 41-142

Surrogate: 1-Chlorooctadecane 89.4 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 3 @ SURFACE (H903873-03)**

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	11/15/2019	ND	1.74	86.9	2.00	5.83		
Toluene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.82		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.75	87.4	2.00	6.00		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.27	87.8	6.00	5.94		
Total BTX	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	3600	16.0	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 90.1 % 41-142

Surrogate: 1-Chlorooctadecane 89.2 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 4 @ SURFACE (H903873-04)**

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	11/15/2019	ND	1.74	86.9	2.00	5.83		
Toluene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.82		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.75	87.4	2.00	6.00		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.27	87.8	6.00	5.94		
Total BTX	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	6480	16.0	11/18/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 4 @ 2' (H903873-05)**

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	11/15/2019	ND	1.74	86.9	2.00	5.83		
Toluene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.82		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.75	87.4	2.00	6.00		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.27	87.8	6.00	5.94		
Total BTX	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 94.0 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 5 @ SURFACE (H903873-06)**

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	11/15/2019	ND	1.74	86.9	2.00	5.83		
Toluene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.82		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.75	87.4	2.00	6.00		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.27	87.8	6.00	5.94		
Total BTEX	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	18200	16.0	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 95.5 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 6 @ SURFACE (H903873-07)**

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	11/15/2019	ND	1.74	86.9	2.00	5.83		
Toluene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.82		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.75	87.4	2.00	6.00		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.27	87.8	6.00	5.94		
Total BTX	<0.300	0.300	11/15/2019	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	8000	16.0	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	17.1	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 97.3 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 7 @ SURFACE (H903873-08)**

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	11/15/2019	ND	1.74	86.9	2.00	5.83		
Toluene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.82		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.75	87.4	2.00	6.00		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.27	87.8	6.00	5.94		
Total BTX	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 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	8640	16.0	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	13.9	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 92.4 % 41-142

Surrogate: 1-Chlorooctadecane 87.8 % 37.6-147

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**Analytical Results For:**

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 8 @ SURFACE (H903873-09)**

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	11/15/2019	ND	1.72	86.2	2.00	5.76		
Toluene*	<0.050	0.050	11/15/2019	ND	1.72	86.0	2.00	5.91		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.59		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.22	87.0	6.00	5.70		
Total BTEx	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 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	13600	16.0	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 93.3 % 41-142

Surrogate: 1-Chlorooctadecane 90.0 % 37.6-147

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**Analytical Results For:**

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 9 @ SURFACE (H903873-10)**

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	11/19/2019	ND	1.80	89.8	2.00	8.23		
Toluene*	<0.050	0.050	11/19/2019	ND	1.87	93.7	2.00	17.7		
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	1.93	96.5	2.00	18.6		
Total Xylenes*	<0.150	0.150	11/19/2019	ND	5.67	94.4	6.00	19.0		
Total BTX	<0.300	0.300	11/19/2019	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	10000	16.0	11/18/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	12.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 91.3 % 41-142

Surrogate: 1-Chlorooctadecane 88.6 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP - 10 @ SURFACE (H903873-11)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23		
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0		
Total BTX	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	8660	16.0	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 93.8 % 41-142

Surrogate: 1-Chlorooctadecane 89.8 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 1 @ SURFACE (H903873-12)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 94.4 % 41-142

Surrogate: 1-Chlorooctadecane 90.2 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 1 @ 1' (H903873-13)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 92.8 % 41-142

Surrogate: 1-Chlorooctadecane 88.5 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 2 @ SURFACE (H903873-14)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	217	109	200	1.41	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	207	104	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 81.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 2 @ 1' (H903873-15)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 3 @ SURFACE (H903873-16)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTEx	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 94.4 % 41-142

Surrogate: 1-Chlorooctadecane 93.5 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 3 @ 1' (H903873-17)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.3 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 92.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.5 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 4 @ SURFACE (H903873-18)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 86.6 % 41-142

Surrogate: 1-Chlorooctadecane 87.4 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 4 @ 1' (H903873-19)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 82.4 % 41-142

Surrogate: 1-Chlorooctadecane 84.9 % 37.6-147

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 LANCE CRENSHAW  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 5 @ SURFACE (H903873-20)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 88.3 % 41-142

Surrogate: 1-Chlorooctadecane 88.5 % 37.6-147

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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NH - 5 @ 1' (H903873-21)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 88.6 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 1 @ SURFACE (H903873-22)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 93.0 % 41-142

Surrogate: 1-Chlorooctadecane 94.1 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 1 @ 1' (H903873-23)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	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	<16.0	16.0	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 92.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.6 % 37.6-147

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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 2 @ SURFACE (H903873-24)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23		
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0		
Total BTX	<0.300	0.300	11/15/2019	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	48.0	16.0	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 92.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 2 @ 1' (H903873-25)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	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	48.0	16.0	11/18/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 89.1 % 41-142

Surrogate: 1-Chlorooctadecane 90.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 3 @ SURFACE (H903873-26)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 83.4 % 41-142

Surrogate: 1-Chlorooctadecane 82.8 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 3 @ 1' (H903873-27)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 94.3 % 41-142

Surrogate: 1-Chlorooctadecane 95.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 4 @ SURFACE (H903873-28)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTX	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 79.9 % 41-142

Surrogate: 1-Chlorooctadecane 79.6 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 4 @ 1' (H903873-29)**

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	11/15/2019	ND	1.80	89.8	2.00	8.23	
Toluene*	<0.050	0.050	11/15/2019	ND	1.87	93.7	2.00	17.7	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.93	96.5	2.00	18.6	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.67	94.4	6.00	19.0	
Total BTEx	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 84.4 % 41-142

Surrogate: 1-Chlorooctadecane 85.4 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 5 @ SURFACE (H903873-30)**

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	11/15/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/15/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.22	87.0	6.00	5.70	
Total BTEx	<0.300	0.300	11/15/2019	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	<16.0	16.0	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 88.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.1 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EH - 5 @ 1' (H903873-31)**

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	11/15/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/15/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.22	87.0	6.00	5.70	
Total BTEX	<0.300	0.300	11/15/2019	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	<16.0	16.0	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 80.6 % 41-142

Surrogate: 1-Chlorooctadecane 82.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 1 @ SURFACE (H903873-32)**

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	11/15/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/15/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.22	87.0	6.00	5.70	
Total BTEx	<0.300	0.300	11/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 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	32.0	16.0	11/18/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 87.4 % 41-142

Surrogate: 1-Chlorooctadecane 88.4 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 1 @ 1' (H903873-33)**

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	11/15/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/15/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.22	87.0	6.00	5.70	
Total BTX	<0.300	0.300	11/15/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 90.3 % 41-142

Surrogate: 1-Chlorooctadecane 90.6 % 37.6-147

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**Analytical Results For:**

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 2 @ SURFACE (H903873-34)**

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	11/15/2019	ND	1.72	86.2	2.00	5.76		
Toluene*	<0.050	0.050	11/15/2019	ND	1.72	86.0	2.00	5.91		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.59		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.22	87.0	6.00	5.70		
Total BTEX	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/18/2019	ND	221	111	200	5.59	
DRO >C10-C28*	<10.0	10.0	11/18/2019	ND	215	108	200	4.69	
EXT DRO >C28-C36	<10.0	10.0	11/18/2019	ND					

Surrogate: 1-Chlorooctane 88.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.0 % 37.6-147

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**Analytical Results For:**

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 2 @ 1' (H903873-35)**

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	11/15/2019	ND	1.72	86.2	2.00	5.76		
Toluene*	<0.050	0.050	11/15/2019	ND	1.72	86.0	2.00	5.91		
Ethylbenzene*	<0.050	0.050	11/15/2019	ND	1.74	86.8	2.00	5.59		
Total Xylenes*	<0.150	0.150	11/15/2019	ND	5.22	87.0	6.00	5.70		
Total BTEX	<0.300	0.300	11/15/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 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	11/18/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/15/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 98.2 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 3 @ SURFACE (H903873-36)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70	
Total BTX	<0.300	0.300	11/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2019	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	11/15/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 97.5 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 3 @ 1' (H903873-37)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76		
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91		
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59		
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70		
Total BTEx	<0.300	0.300	11/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 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	11/18/2019	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	11/15/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 4 @ SURFACE (H903873-38)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76		
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91		
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59		
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70		
Total BTEx	<0.300	0.300	11/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 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	11/18/2019	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	11/15/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 97.1 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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**Analytical Results For:**

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 4 @ 1' (H903873-39)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76		
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91		
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59		
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70		
Total BTEX	<0.300	0.300	11/16/2019	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	<16.0	16.0	11/18/2019	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	11/15/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 99.8 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 5 @ SURFACE (H903873-40)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70	
Total BTX	<0.300	0.300	11/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2019	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	11/15/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SH - 5 @ 1' (H903873-41)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76		
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91		
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59		
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70		
Total BTX	<0.300	0.300	11/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 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	11/18/2019	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	11/15/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 1 @ SURFACE (H903873-42)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70	
Total BTX	<0.300	0.300	11/16/2019	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	<16.0	16.0	11/18/2019	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	11/15/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 1 @ 1' (H903873-43)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76		
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91		
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59		
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70		
Total BTEx	<0.300	0.300	11/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	11/18/2019	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	11/15/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/15/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/15/2019	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

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 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 2 @ SURFACE (H903873-44)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70	
Total BTX	<0.300	0.300	11/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 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	11/18/2019	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	11/16/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/16/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/16/2019	ND					

Surrogate: 1-Chlorooctane 97.8 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 2 @ 1' (H903873-45)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76		
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91		
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59		
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70		
Total BTEX	<0.300	0.300	11/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2019	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	11/16/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/16/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/16/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 3 @ SURFACE (H903873-46)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70	
Total BTX	<0.300	0.300	11/16/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2019	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	11/16/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/16/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/16/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 3 @ 1' (H903873-47)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70	
Total BTX	<0.300	0.300	11/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 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	11/18/2019	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	11/16/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/16/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/16/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 4 @ SURFACE (H903873-48)**

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	11/16/2019	ND	1.72	86.2	2.00	5.76	
Toluene*	<0.050	0.050	11/16/2019	ND	1.72	86.0	2.00	5.91	
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.74	86.8	2.00	5.59	
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.22	87.0	6.00	5.70	
Total BTX	<0.300	0.300	11/16/2019	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	48.0	16.0	11/18/2019	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	11/16/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/16/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/16/2019	ND					

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 99.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 4 @ 1' (H903873-49)**

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	11/16/2019	ND	1.71	85.6	2.00	6.30	
Toluene*	<0.050	0.050	11/16/2019	ND	1.71	85.3	2.00	6.39	
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.72	86.2	2.00	6.22	
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.19	86.5	6.00	6.39	
Total BTEx	<0.300	0.300	11/16/2019	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	<16.0	16.0	11/18/2019	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	11/16/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/16/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/16/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 5 @ SURFACE (H903873-50)**

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	11/16/2019	ND	1.71	85.6	2.00	6.30		
Toluene*	<0.050	0.050	11/16/2019	ND	1.71	85.3	2.00	6.39		
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.72	86.2	2.00	6.22		
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.19	86.5	6.00	6.39		
Total BTEx	<0.300	0.300	11/16/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2019	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	11/16/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/16/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/16/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	11/14/2019	Sampling Date:	11/12/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WH - 5 @ 1' (H903873-51)**

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	11/16/2019	ND	1.71	85.6	2.00	6.30	
Toluene*	<0.050	0.050	11/16/2019	ND	1.71	85.3	2.00	6.39	
Ethylbenzene*	<0.050	0.050	11/16/2019	ND	1.72	86.2	2.00	6.22	
Total Xylenes*	<0.150	0.150	11/16/2019	ND	5.19	86.5	6.00	6.39	
Total BTEX	<0.300	0.300	11/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	11/18/2019	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	11/16/2019	ND	215	107	200	1.14	
DRO >C10-C28*	<10.0	10.0	11/16/2019	ND	214	107	200	2.37	
EXT DRO >C28-C36	<10.0	10.0	11/16/2019	ND					

Surrogate: 1-Chlorooctane 114 % 41-142

Surrogate: 1-Chlorooctadecane 121 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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---

### Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



## ARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ettech Environmental & Safety Solutions, Inc.

Project Manager: Lance Crenshaw

Address: P.O. Box 301

City: Lovington State: NM Zip: 88260

Phone #: (575) 396-2378 Fax #: (575) 396-1429

Project #: 11488 Project Owner: Goodnight Midstream

Project Name: Wrigley to Piper

Project Location: Rural Lea

Sampler Name: Catalina Villa

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H903873

		(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.	SAMPLING	DATE	TIME	ANALYSIS REQUEST									
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :				Chloride	TPH (8015M)	BTEX (8021B)							
1	SP-1 @ Surface	g	1	x						x	11/12/19	9:00	x	x	x							
2	SP-2 @ Surface	g	1	x						x	11/12/19	9:03	x	x	x							
3	SP-3 @ Surface	g	1	x						x	11/12/19	9:06	x	x	x							
4	SP-4 @ Surface	g	1	x						x	11/12/19	9:09	x	x	x							
5	SP-4 @ 2'	g	1	x						x	11/12/19	10:45	x	x	x							
6	SP-5 @ Surface	g	1	x						x	11/12/19	9:12	x	x	x							
7	SP-6 @ Surface	g	1	x						x	11/12/19	9:15	x	x	x							
8	SP-7 @ Surface	g	1	x						x	11/12/19	9:18	x	x	x							
9	SP-8 @ Surface	g	1	x						x	11/12/19	9:21	x	x	x							
10	SP-9 @ Surface	g	1	x						x	11/12/19	9:24	x	x	x							

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Relinquished By:

Date: 11-14-19

Received By:

Phone Result:

Fax Result:

Yes ☐ No ☐

Add'l Phone #:

Add'l Fax #:

Relinquished By:

Date: 11-14-19

Received By:

REMARKS:

Delivered By: (Circle One)

-2.72

#97

Sample Condition

CHECKED BY: (Initials)

Please email results to lance@etechnv.com, pm@etechnv.com.

Sampler - UPS - Bus - Other:

Connected -2.32

Cool ☐ Intact ☐

Yes ☒ No ☐

REMARKS:













Page 57 of 50

101 East Marland, Hobbs, NM 88240  
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476







Page 59 of 59



# ORDINAL LABORATORIES

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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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November 20, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: WRIGLEY TO PIPER

Enclosed are the results of analyses for samples received by the laboratory on 11/15/19 16:25.

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 "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 1 @ 3' (H903896-01)**

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	11/19/2019	ND	1.96	98.0	2.00	0.776	
Toluene*	<0.050	0.050	11/19/2019	ND	2.04	102	2.00	1.73	
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	2.06	103	2.00	3.35	
Total Xylenes*	<0.150	0.150	11/19/2019	ND	6.12	102	6.00	3.39	
Total BTX	<0.300	0.300	11/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	11/20/2019	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 98.4 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 2 @ 3' (H903896-02)**

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	11/19/2019	ND	1.96	98.0	2.00	0.776	
Toluene*	<0.050	0.050	11/19/2019	ND	2.04	102	2.00	1.73	
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	2.06	103	2.00	3.35	
Total Xylenes*	<0.150	0.150	11/19/2019	ND	6.12	102	6.00	3.39	
Total BTX	<0.300	0.300	11/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	64.0	16.0	11/20/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 90.3 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 5 @ 3' (H903896-03)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/19/2019	ND	1.96	98.0	2.00	0.776		
Toluene*	<0.050	0.050	11/19/2019	ND	2.04	102	2.00	1.73		
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	2.06	103	2.00	3.35		
Total Xylenes*	<0.150	0.150	11/19/2019	ND	6.12	102	6.00	3.39		
Total BTEx	<0.300	0.300	11/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	11/20/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 97.9 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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**Analytical Results For:**

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

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 6 @ 4' (H903896-04)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/19/2019	ND	1.96	98.0	2.00	0.776	
Toluene*	<0.050	0.050	11/19/2019	ND	2.04	102	2.00	1.73	
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	2.06	103	2.00	3.35	
Total Xylenes*	<0.150	0.150	11/19/2019	ND	6.12	102	6.00	3.39	
Total BTEx	<0.300	0.300	11/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 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	4680	16.0	11/20/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 94.7 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 6 @ 5' (H903896-05)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/19/2019	ND	1.96	98.0	2.00	0.776	
Toluene*	<0.050	0.050	11/19/2019	ND	2.04	102	2.00	1.73	
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	2.06	103	2.00	3.35	
Total Xylenes*	<0.150	0.150	11/19/2019	ND	6.12	102	6.00	3.39	
Total BTEx	<0.300	0.300	11/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	1550	16.0	11/20/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 93.1 % 41-142

Surrogate: 1-Chlorooctadecane 95.6 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 7 @ 3' (H903896-06)**

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	11/19/2019	ND	1.96	98.0	2.00	0.776		
Toluene*	<0.050	0.050	11/19/2019	ND	2.04	102	2.00	1.73		
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	2.06	103	2.00	3.35		
Total Xylenes*	<0.150	0.150	11/19/2019	ND	6.12	102	6.00	3.39		
Total BTEx	<0.300	0.300	11/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	11/20/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 96.1 % 41-142

Surrogate: 1-Chlorooctadecane 97.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 8 @ 4' (H903896-07)**

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	11/19/2019	ND	1.96	98.0	2.00	0.776	
Toluene*	<0.050	0.050	11/19/2019	ND	2.04	102	2.00	1.73	
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	2.06	103	2.00	3.35	
Total Xylenes*	<0.150	0.150	11/19/2019	ND	6.12	102	6.00	3.39	
Total BTX	<0.300	0.300	11/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 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	592	16.0	11/20/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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 Fax To: (575) 396-1429

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 9 @ 4' (H903896-08)**

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	11/19/2019	ND	1.96	98.0	2.00	0.776		
Toluene*	<0.050	0.050	11/19/2019	ND	2.04	102	2.00	1.73		
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	2.06	103	2.00	3.35		
Total Xylenes*	<0.150	0.150	11/19/2019	ND	6.12	102	6.00	3.39		
Total BTEX	<0.300	0.300	11/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 127 % 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	3760	16.0	11/20/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 98.3 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 9 @ 5' (H903896-09)**

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	11/19/2019	ND	1.96	98.0	2.00	0.776		
Toluene*	<0.050	0.050	11/19/2019	ND	2.04	102	2.00	1.73		
Ethylbenzene*	<0.050	0.050	11/19/2019	ND	2.06	103	2.00	3.35		
Total Xylenes*	<0.150	0.150	11/19/2019	ND	6.12	102	6.00	3.39		
Total BTX	<0.300	0.300	11/19/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	6080	16.0	11/20/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	11/15/2019	Sampling Date:	11/15/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 10 @ 4' (H903896-10)**

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	11/20/2019	ND	1.80	90.1	2.00	2.37	
Toluene*	<0.050	0.050	11/20/2019	ND	1.78	89.1	2.00	2.44	
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.82	90.8	2.00	2.24	
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.46	91.0	6.00	2.79	
Total BTX	<0.300	0.300	11/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 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	224	16.0	11/20/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 97.9 % 41-142

Surrogate: 1-Chlorooctadecane 99.1 % 37.6-147

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 Fax To: (575) 396-1429

Received:	11/15/2019	Sampling Date:	11/14/2019
Reported:	11/20/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SP 3 @ 2' (H903896-11)**

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	11/20/2019	ND	1.80	90.1	2.00	2.37		
Toluene*	<0.050	0.050	11/20/2019	ND	1.78	89.1	2.00	2.44		
Ethylbenzene*	<0.050	0.050	11/20/2019	ND	1.82	90.8	2.00	2.24		
Total Xylenes*	<0.150	0.150	11/20/2019	ND	5.46	91.0	6.00	2.79		
Total BTX	<0.300	0.300	11/20/2019	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	80.0	16.0	11/20/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/19/2019	ND	210	105	200	2.05	
DRO >C10-C28*	<10.0	10.0	11/19/2019	ND	225	112	200	0.708	
EXT DRO >C28-C36	<10.0	10.0	11/19/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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### Notes and Definitions

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

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

---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 772-0470 (505) 672-7004 FAX (325) 673-7020

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Goodnight Midstream										P.O. #:		BILL TO										ANALYSIS REQUEST																			
Project Manager: Lance Crenshaw										Company: Etech																															
Address:										Attn:																															
City:										Address:																															
Phone #:										City:																															
Fax #:										State:																															
Project #: 11488										Zip:																															
Project Name: Wrigley to Piper Pipeline										Phone #:																															
Project Location:										Fax #:																															
Sampler Name: Catalina Baeza										PRESERV		SAMPLING																													
FOR LAB USE ONLY																																									
Lab I.D.										Sample I.D.																															
H90596-										(G)RAB OR (C)OMP.																															
										# CONTAINERS																															
										GROUNDWATER																															
										WASTEWATER																															
										SOIL																															
										OIL																															
										SLUDGE																															
										OTHER :																															
										ACID/BASE:																															
										ICE / COOL																															
										OTHER :																															
										DATE		TIME																													
01 SP1 @ 3'										G		1										11/15/19 09:00										✓									
02 SP2 @ 3'										G		1										11/15/19 09:15										✓									
03 SP5 @ 3'										G		1										11/15/19 09:30										✓									
04 SP6 @ 4'										G		1										11/15/19 09:40										✓									
05 SP6 @ 5'										G		1										11/15/19 10:00										✓									
06 SP7 @ 3'										G		1										11/15/19 10:20										✓									
07 SP8 @ 4'										G		1										11/15/19 10:30										✓									
08 SP9 @ 4'										G		1										11/15/19 10:50										✓									
09 SP9 @ 5'										G		1										11/15/19 11:30										✓									
10 SP10 @ 4'										G		1										11/15/19 11:35										✓									
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Relinquished By:										Date: 11/15/19		Received By: Heidi Anderson																													
Relinquished By:										Time: 10:15																															
Delivered By: (Circle One) +4										Time:																															
Sample Condition										Cool		Intact										CHECKED BY: (Initials)																			
Yes										Yes		Yes										✓																			
No										No		No										✓																			
Fax Result: Yes										No		Add'l Phone #:																													
Fax Result: No										Yes		Add'l Fax #:																													
REMARKS:																																									
email results																																									
pm@etechenv.com																																									

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



**CARDINAL LABORATORIES**

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

Company Name: Goodnight Midstream

Project Manager: Lance Crenshaw

Address:

City: State: Zip:

Phone #: Fax #:

Project #: 11463 Project Owner:

Project Name: Wrigley to Piper Pipeline

Project Location:

Sample Name: Catalina Baeza

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

4903896-11

SP3 @ 2'

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

11/14/19 12:30

✓

✓

✓

Chlorides

TPH 8015 M

BTEX

Texas TPH

Complete Cations/Anions

TDS

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Relinquished By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Relinquished By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Delivered By: (Circle One) +14

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Received By:

Date: 11/15/19

Time: 10:25

Sample - UPS - Bus - Other: 3.30/3.10

#97

Sample Condition

Cool Intact

Yes Yes

No No

CHECKED BY:

(Initials)

pm@etechenv.com

REMARKS:

Phone Result: ☐ Yes ☒ No

Fax Result: ☐ Yes ☒ No

Add'l Phone #:

Add'l Fax #:

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





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

---

December 16, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: WRIGLEY TO PIPER

Enclosed are the results of analyses for samples received by the laboratory on 12/10/19 16:05.

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 "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS17 (H904133-01)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTEX	<0.300	0.300	12/11/2019	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	16.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 93.8 % 41-142

Surrogate: 1-Chlorooctadecane 98.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS18 (H904133-02)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 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	2680	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS19 (H904133-03)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS20 (H904133-04)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1500	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS21 (H904133-05)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTEX	<0.300	0.300	12/11/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1180	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS22 (H904133-06)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTEX	<0.300	0.300	12/11/2019	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	5160	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS23 (H904133-07)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 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	3160	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 99.1 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS24 (H904133-08)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	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	1120	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 81.1 % 41-142

Surrogate: 1-Chlorooctadecane 83.0 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS25 (H904133-09)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 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	1600	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 82.6 % 41-142

Surrogate: 1-Chlorooctadecane 84.3 % 37.6-147

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Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS26 (H904133-10)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1920	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 82.1 % 41-142

Surrogate: 1-Chlorooctadecane 83.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS27 (H904133-11)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1980	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 83.6 % 41-142

Surrogate: 1-Chlorooctadecane 85.4 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS28 (H904133-12)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTEx	<0.300	0.300	12/12/2019	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	2400	16.0	12/11/2019	ND	416	104	400	0.00	QM-07	

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	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 81.2 % 41-142

Surrogate: 1-Chlorooctadecane 82.4 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS29 (H904133-13)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13		
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02		
Total BTX	<0.300	0.300	12/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 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	2920	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 85.0 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS30 (H904133-14)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 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	3120	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 82.2 % 41-142

Surrogate: 1-Chlorooctadecane 83.8 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS31 (H904133-15)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 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	2720	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 86.4 % 41-142

Surrogate: 1-Chlorooctadecane 88.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS32 (H904133-16)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 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	2440	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.1 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS33 (H904133-17)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 83.2 % 41-142

Surrogate: 1-Chlorooctadecane 83.8 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS34 (H904133-18)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 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	272	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 75.5 % 41-142

Surrogate: 1-Chlorooctadecane 76.7 % 37.6-147

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Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS35 (H904133-19)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 75.6 % 41-142

Surrogate: 1-Chlorooctadecane 76.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS36 (H904133-20)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	848	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 71.1 % 41-142

Surrogate: 1-Chlorooctadecane 71.9 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS37 (H904133-21)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 75.6 % 41-142

Surrogate: 1-Chlorooctadecane 76.6 % 37.6-147

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Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS38 (H904133-22)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 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	224	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 77.0 % 41-142

Surrogate: 1-Chlorooctadecane 77.8 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS39 (H904133-23)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 77.6 % 41-142

Surrogate: 1-Chlorooctadecane 77.7 % 37.6-147

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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS40 (H904133-24)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 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	4520	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 74.6 % 41-142

Surrogate: 1-Chlorooctadecane 76.0 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS41 (H904133-25)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 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	48.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 75.7 % 41-142

Surrogate: 1-Chlorooctadecane 76.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS42 (H904133-26)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 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	64.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 78.2 % 41-142

Surrogate: 1-Chlorooctadecane 79.9 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS43 (H904133-27)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	368	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 77.4 % 41-142

Surrogate: 1-Chlorooctadecane 79.4 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS44 (H904133-28)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13		
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02		
Total BTX	<0.300	0.300	12/12/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 85.3 % 41-142

Surrogate: 1-Chlorooctadecane 87.0 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS45 (H904133-29)**

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	12/12/2019	ND	2.07	103	2.00	1.27	QR-03
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	QR-03
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	QR-03
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	QR-03
Total BTEx	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 89.2 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS46 (H904133-30)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	592	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 89.1 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS47 (H904133-31)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	448	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 88.1 % 41-142

Surrogate: 1-Chlorooctadecane 91.3 % 37.6-147

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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW2 (H904133-32)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 90.2 % 41-142

Surrogate: 1-Chlorooctadecane 91.2 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW3A (H904133-33)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW4 (H904133-34)**

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	12/13/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/13/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/13/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/13/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/13/2019	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	352	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW5A (H904133-35)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	192	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 91.9 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW6 (H904133-36)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	400	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.4 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW7A (H904133-37)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	272	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 91.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW8 (H904133-38)**

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	12/13/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/13/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/13/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/13/2019	ND	5.87	97.9	6.00	0.636	
Total BTEX	<0.300	0.300	12/13/2019	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	80.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 85.1 % 41-142

Surrogate: 1-Chlorooctadecane 87.3 % 37.6-147

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Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW15B (H904133-39)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	272	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 86.5 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW7C (H904133-40)**

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	12/12/2019	ND	2.07	103	2.00	1.27		
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636		
Total BTEX	<0.300	0.300	12/12/2019	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	16.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW8 (H904133-41)**

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	12/13/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/13/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/13/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/13/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW9 (H904133-42)**

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	12/12/2019	ND	2.07	103	2.00	1.27		
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636		
Total BTEX	<0.300	0.300	12/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 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	112	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 88.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW13 (H904133-43)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.3 % 41-142

Surrogate: 1-Chlorooctadecane 92.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW14 (H904133-44)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	96.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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### Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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

---

Celey D. Keene, Lab Director/Quality Manager







**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**

<b>Company Name:</b> Goodnight Midstream		<b>P.O. #:</b>		<b>BILL TO</b>						<b>ANALYSIS REQUEST</b>					
<b>Project Manager:</b> Lance Crenshaw		<b>Company:</b> Etech													
<b>Address:</b>		<b>Attn:</b>													
<b>City:</b>		<b>State:</b>		<b>Zip:</b>											
<b>Phone #:</b>		<b>Fax #:</b>		<b>Address:</b>											
<b>Project #:</b> 11488		<b>Project Owner:</b>		<b>City:</b>		<b>State:</b>		<b>Zip:</b>							
<b>Project Name:</b> Wrigley to Piper		<b>State:</b>		<b>City:</b>		<b>Zip:</b>									
<b>Project Location:</b> Lea County		<b>Phone #:</b>		<b>Fax #:</b>											
<b>Sampler Name:</b> Matt Grieco															
<b>FOR LAB USE ONLY</b>															
<b>Lab I.D.</b>		<b>Sample I.D.</b>		<b>(G)RAB OR (C)OMP.</b>		<b># CONTAINERS</b>		<b>MATRIX</b>		<b>PRESERV.</b>		<b>SAMPLING</b>			
H904133		21		FS37		G 1		✓		12/9/19		✓		Chlorides	
22		FS38		G 1		✓		12/9/19		✓		✓		TPH 8015 M	
23		FS39		G 1		✓		12/9/19		✓		✓		BTEX	
24		FS40		G 1		✓		12/9/19		✓		✓		Texas TPH	
25		FS41		G 1		✓		12/9/19		✓		✓		Complete Cations/Anions	
26		FS42		G 1		✓		12/9/19		✓		✓		TDS	
27		FS43		G 1		✓		12/9/19		✓		✓			
28		FS44		G 1		✓		12/9/19		✓		✓			
29		FS45		G 1		✓		12/9/19		✓		✓			
30		FS46		G 1		✓		12/9/19		✓		✓			

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<b>Relinquished By:</b>	<b>Date:</b> 12/10/19	<b>Time:</b> 10:05	<b>Received By:</b>	<b>Date:</b>	<b>Time:</b>
<i>[Signature]</i>			<i>[Signature]</i>		

**Delivered By:** (Circle One) ☒ Cool ☐ Intact ☐ Yes ☐ No

**Sampler - UPS - Bus - Other:** D.96/1.32 #97 ☐ Yes ☐ No

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

**REMARKS:**

email results pm@etecheny.com

**Phone Result:** ☐ Yes ☒ No **Add'l Phone #:**

**Fax Result:** ☐ Yes ☒ No **Add'l Fax #:**





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: Goodnight Midstream						P.O. #:
Project Manager: Lance Crenshaw						Company: Etech
Address:						Attn:
City:						State:
Phone #:						Fax #:
Project #: 11488						City:
Project Name: Wrigley to Piper						State:
Project Location: Lea County						Zip:
Sample Name: Matt Grieco						Phone #:
FOR LAB USE ONLY						Fax #:
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP,	# CONTAINERS	GROUNDWATER
H904133	FS47	G	1	✓	✓	WASTEWATER
31	NW2	G	1	✓	✓	SOIL
32	NW3A	G	1	✓	✓	OIL
33	NW4	G	1	✓	✓	SLUDGE
34	NW5A	G	1	✓	✓	OTHER :
35	NW6	G	1	✓	✓	ACID/BASE:
36	NW7A	G	1	✓	✓	ICE / COOL
37	NW8	G	1	✓	✓	OTHER :
38	WW15B	G	1	✓	✓	DATE
39	SW7C	G	1	✓	✓	TIME
40		G	1	✓	✓	
P.L.E.A.S.E 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 analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable services. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated remedies or otherwise.						
Relinquished By: [Signature]		Date: 11/10/19	Received By: [Signature]		REMARKS: email results  pm@etechenv.com	
Delivered By: (Circle One)		Time: 10:05 AM		Sample Condition Cool Intact Yes No Checked BY: [Initials]		
Fax Result: Yes No		Add'l Phone #:		Add'l Fax #:		

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



101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
 (807) 526-7004 FAX (807) 526-7030

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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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December 17, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: WRIGLEY TO PIPER

Enclosed are the results of analyses for samples received by the laboratory on 12/11/19 16:55.

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 "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS48 (H904154-01)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	208	16.0	12/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 90.2 % 41-142

Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS49 (H904154-02)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3		
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5		
Total BTX	<0.300	0.300	12/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	1730	16.0	12/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.5 % 41-142

Surrogate: 1-Chlorooctadecane 92.2 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS50 (H904154-03)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTEX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 96.2 % 37.6-147

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Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS51 (H904154-04)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTEX	<0.300	0.300	12/14/2019	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	608	16.0	12/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 98.1 % 41-142

Surrogate: 1-Chlorooctadecane 98.1 % 37.6-147

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Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS52 (H904154-05)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/16/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5	
Total BTEX	<0.300	0.300	12/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	2400	16.0	12/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 96.7 % 41-142

Surrogate: 1-Chlorooctadecane 97.5 % 37.6-147

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Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS53 (H904154-06)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	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	96.0	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.8 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS54 (H904154-07)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTEX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	320	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 83.3 % 41-142

Surrogate: 1-Chlorooctadecane 82.3 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS55 (H904154-08)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/16/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.2 % 37.6-147

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Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS56 (H904154-09)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	224	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 96.4 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS57 (H904154-10)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	112	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 93.0 % 41-142

Surrogate: 1-Chlorooctadecane 89.7 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS58 (H904154-11)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3		
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5		
Total BTX	<0.300	0.300	12/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	48.0	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.9 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS59 (H904154-12)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 91.0 % 41-142

Surrogate: 1-Chlorooctadecane 87.7 % 37.6-147

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Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS60 (H904154-13)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	144	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 88.7 % 41-142

Surrogate: 1-Chlorooctadecane 84.0 % 37.6-147

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Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS61 (H904154-14)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3		
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5		
Total BTX	<0.300	0.300	12/16/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 98.0 % 41-142

Surrogate: 1-Chlorooctadecane 97.9 % 37.6-147

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Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW9A (H904154-15)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	144	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 94.8 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW10 (H904154-16)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 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	144	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 71.7 % 41-142

Surrogate: 1-Chlorooctadecane 73.1 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW11B (H904154-17)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6	QR-03
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5	QR-03, QM-07
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0	QR-03, QM-07
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0	QR-03, QM-07
Total BTEx	<0.300	0.300	12/14/2019	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	64.0	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 76.5 % 41-142

Surrogate: 1-Chlorooctadecane 78.2 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW12 (H904154-18)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTEX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 79.2 % 41-142

Surrogate: 1-Chlorooctadecane 81.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW13 (H904154-19)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTEX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	144	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 78.8 % 41-142

Surrogate: 1-Chlorooctadecane 80.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW14 (H904154-20)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTEX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	304	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 78.6 % 41-142

Surrogate: 1-Chlorooctadecane 80.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW10 (H904154-21)**

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	12/16/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/16/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.08	84.7	6.00	16.0		
Total BTX	<0.300	0.300	12/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 75.2 % 41-142

Surrogate: 1-Chlorooctadecane 77.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW11A (H904154-22)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 80.3 % 41-142

Surrogate: 1-Chlorooctadecane 81.7 % 37.6-147

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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW12 (H904154-23)**

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	12/16/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/16/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.08	84.7	6.00	16.0		
Total BTX	<0.300	0.300	12/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 77.9 % 41-142

Surrogate: 1-Chlorooctadecane 79.2 % 37.6-147

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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW13 (H904154-24)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	96.0	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 76.2 % 41-142

Surrogate: 1-Chlorooctadecane 78.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager





101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 783-2476 (505) 673-7001 FAX (325) 673-7020

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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Goodnight Midstream						P.O. #:	
Project Manager: Lance Crenshaw						Company: Etech	
Address:						Attn:	
City:						Address:	
Phone #:						City:	
Fax #:						State:	
Project #: 11488						Zip:	
Project Owner:							
Project Name: Wrigley to Piper Pipeline							
Project Location: Lea County						Phone #:	
Fax #:							
Sample Name: Matt Grieco						PRESERV.	
FOR LAB USE ONLY						SAMPLING	
Lab I.D.						Chlorides	
Sample I.D.						TPH 8015 M	
(G)RAB OR (C)OMP.						BTEX	
# CONTAINERS						Texas TPH	
GROUNDWATER						Complete Cations/Anions	
WASTEWATER						TDS	
SOIL							
OIL							
SLUDGE							
OTHER :							
ACID/BASE:							
ICE / COOL							
OTHER :							
DATE							
TIME							
FS48						✓	
FS49						✓	
FS50						✓	
FS51						✓	
FS52						✓	
FS53						✓	
FS54						✓	
FS55						✓	
FS56						✓	
FS57						✓	
Relinquished By:						REMARKS:	
Date:						Phone Result: Yes No Add'l Phone #:	
Time:						Fax Result: Yes No Add'l Fax #:	
Received By:						email results	
Delivered By: (Circle One)						pm@etechenv.com	
Sample Condition							
Cool Intact							
Yes No							
CHECKED BY:							
Signature							

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



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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Goodnight Midstream										P.O. #:		BILL TO										ANALYSIS REQUEST									
Project Manager: Lance Crenshaw										Company: Etech																					
Address:										Attn:																					
City:										Address:																					
Phone #:										City:																					
Project #:										State:																					
Project Name: Wrigley to Piper Pipeline										Zip:																					
Project Location: Lea County										Phone #:																					
Sample Name: Matt Grieco										Fax #:																					
FOR LAB USE ONLY										PRESERV.		SAMPLING																			
Lab I.D.										DATE		TIME																			
Sample I.D.										DATE		TIME																			
H904154										DATE		TIME																			
11										DATE		TIME																			
FS58										DATE		TIME																			
12										DATE		TIME																			
FS59										DATE		TIME																			
13										DATE		TIME																			
FS60										DATE		TIME																			
14										DATE		TIME																			
FS61										DATE		TIME																			
15										DATE		TIME																			
NW9A										DATE		TIME																			
16										DATE		TIME																			
NW10										DATE		TIME																			
17										DATE		TIME																			
NW11B										DATE		TIME																			
18										DATE		TIME																			
NW12										DATE		TIME																			
19										DATE		TIME																			
NW13										DATE		TIME																			
20										DATE		TIME																			
NW14										DATE		TIME																			
21										DATE		TIME																			
NW15										DATE		TIME																			
22										DATE		TIME																			
NW16										DATE		TIME																			
23										DATE		TIME																			
NW17										DATE		TIME																			
24										DATE		TIME																			
NW18										DATE		TIME																			
25										DATE		TIME																			
NW19										DATE		TIME																			
26										DATE		TIME																			
NW20										DATE		TIME																			
27										DATE		TIME																			
NW21										DATE		TIME																			
28										DATE		TIME																			
NW22										DATE		TIME																			
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52										DATE																					

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**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**

Company Name: Goodnight Midstream  
 Project Manager: Lance Crenshaw

Address:

City: State: Zip:

Phone #: Fax #:

Project #: 11488 Project Owner:

Project Name: Wrigley to Piper Pipeline

Project Location: Lea County

Sample Name: Matt Grieco

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

1190454-

21  
22  
23  
24

SW10  
SW11A  
SW12  
SW13

(G)RAB OR (C)OMP.  
# CONTAINERS

GROUNDWATER  
WASTEWATER  
SOIL  
OIL  
SLUDGE  
OTHER :

ACID/BASE:  
ICE / COOL  
OTHER :

DATE

TIME

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
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BTEX  
Texas TPH  
Complete Cations/Anions  
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Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

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Relinquished By:

Date: 12/11/19  
Time: 10:55

Received By:

12/11/19

10:55

email results

pm@etechnv.com

Phone Result: ☐ Yes ☒ No

Fax Result: ☐ Yes ☒ No

Add'l Phone #:

Add'l Fax #:

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Relinquished By:

Date: 12/11/19  
Time: 10:55

Received By:

12/11/19

10:55

email results

pm@etechnv.com

Phone Result: ☐ Yes ☒ No

Fax Result: ☐ Yes ☒ No

Add'l Phone #:

Add'l Fax #:

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Delivered By: (Circle One)

2.10/-1.70 #97

Sample Condition

Cool ☒ Intact ☒

Yes ☒ No ☒

CHECKED BY: (Initials)

pm@etechnv.com

Phone Result: ☐ Yes ☒ No

Fax Result: ☐ Yes ☒ No

Add'l Phone #:

Add'l Fax #:

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
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Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

Chlorides  
TPH 8015 M  
BTEX  
Texas TPH  
Complete Cations/Anions  
TDS

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---

December 11, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: WRIGLEY TO PIPER

Enclosed are the results of analyses for samples received by the laboratory on 12/06/19 14:30.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/02/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 1 (H904094-01)**

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	12/09/2019	ND	2.09	105	2.00	6.43		
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08		
Total BTEX	<0.300	0.300	12/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1390	16.0	12/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/02/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 2 (H904094-02)**

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	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1570	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/02/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 3 (H904094-03)**

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	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1040	16.0	12/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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**Analytical Results For:**

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 LANCE CRENSHAW  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/02/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 4 (H904094-04)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/09/2019	ND	2.09	105	2.00	6.43		
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08		
Total BTEX	<0.300	0.300	12/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	896	16.0	12/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 5 (H904094-05)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	3040	16.0	12/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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 LANCE CRENSHAW  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 6 (H904094-06)**

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	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 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	736	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 7 (H904094-07)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTEX	<0.300	0.300	12/09/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1900	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 8 (H904094-08)**

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	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTEX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1620	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 94.7 % 41-142

Surrogate: 1-Chlorooctadecane 93.0 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 9 (H904094-09)**

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	12/09/2019	ND	2.09	105	2.00	6.43		
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08		
Total BTEX	<0.300	0.300	12/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	864	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 90.4 % 41-142

Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

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Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 10 (H904094-10)**

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	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	976	16.0	12/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 92.8 % 41-142

Surrogate: 1-Chlorooctadecane 91.3 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 11 (H904094-11)**

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	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTEx	<0.300	0.300	12/09/2019	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	2080	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.6 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 12 (H904094-12)**

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	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	1070	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 89.3 % 41-142

Surrogate: 1-Chlorooctadecane 87.3 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 13 (H904094-13)**

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	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTEX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1460	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 92.8 % 41-142

Surrogate: 1-Chlorooctadecane 90.7 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 14 (H904094-14)**

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	12/09/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/09/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.87	97.9	6.00	3.97	
Total BTEX	<0.300	0.300	12/09/2019	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	1780	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 15 (H904094-15)**

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	12/09/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/09/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.87	97.9	6.00	3.97	
Total BTEX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 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	1280	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 86.8 % 41-142

Surrogate: 1-Chlorooctadecane 86.2 % 37.6-147

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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 16 (H904094-16)**

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	12/09/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/09/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.87	97.9	6.00	3.97	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	1840	16.0	12/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 90.3 % 41-142

Surrogate: 1-Chlorooctadecane 88.8 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 1 A (H904094-17)**

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	12/09/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/09/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.87	97.9	6.00	3.97	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	12/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 97.6 % 41-142

Surrogate: 1-Chlorooctadecane 90.6 % 37.6-147

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

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 2 B (H904094-18)**

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	12/09/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/09/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.87	97.9	6.00	3.97	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	64.0	16.0	12/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 95.8 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 3 B (H904094-19)**

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	12/09/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/09/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.87	97.9	6.00	3.97	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	48.0	16.0	12/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 95.4 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 4 A (H904094-20)**

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	12/09/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/09/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.87	97.9	6.00	3.97	
Total BTEx	<0.300	0.300	12/09/2019	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	144	16.0	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 93.0 % 41-142

Surrogate: 1-Chlorooctadecane 89.8 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 5 A (H904094-21)**

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	12/09/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/09/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.87	97.9	6.00	3.97	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 85.9 % 41-142

Surrogate: 1-Chlorooctadecane 82.8 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 6 (H904094-22)**

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	12/09/2019	ND	2.09	104	2.00	2.55		
Toluene*	<0.050	0.050	12/09/2019	ND	2.04	102	2.00	2.34		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.00	100	2.00	3.00		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.87	97.9	6.00	3.97		
Total BTEx	<0.300	0.300	12/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 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	48.0	16.0	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 85.3 % 41-142

Surrogate: 1-Chlorooctadecane 81.8 % 37.6-147

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**Analytical Results For:**

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 7 (H904094-23)**

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	12/10/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97	
Total BTEX	<0.300	0.300	12/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 92.3 % 41-142

Surrogate: 1-Chlorooctadecane 93.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 8 (H904094-24)**

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	12/10/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97	
Total BTEx	<0.300	0.300	12/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 9 (H904094-25)**

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	12/10/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97	
Total BTEX	<0.300	0.300	12/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 94.3 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/03/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 10 (H904094-26)**

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	12/10/2019	ND	2.09	104	2.00	2.55		
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34		
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00		
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97		
Total BTEx	<0.300	0.300	12/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	64.0	16.0	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 93.9 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW 11 A (H904094-27)**

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	12/10/2019	ND	2.09	104	2.00	2.55		
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34		
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00		
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97		
Total BTEx	<0.300	0.300	12/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.5 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 1 A (H904094-28)**

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	12/10/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97	
Total BTEx	<0.300	0.300	12/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 96.4 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 1 B (H904094-29)**

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	12/10/2019	ND	2.09	104	2.00	2.55		
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34		
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00		
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97		
Total BTEx	<0.300	0.300	12/10/2019	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	<16.0	16.0	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 92.9 % 41-142

Surrogate: 1-Chlorooctadecane 94.5 % 37.6-147

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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 2 A (H904094-30)**

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	12/10/2019	ND	2.09	104	2.00	2.55		
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34		
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00		
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97		
Total BTEx	<0.300	0.300	12/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 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	304	16.0	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 93.9 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 3 A (H904094-31)**

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	12/10/2019	ND	2.09	104	2.00	2.55		
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34		
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00		
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97		
Total BTEx	<0.300	0.300	12/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	48.0	16.0	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 95.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 4 (H904094-32)**

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	12/10/2019	ND	2.09	104	2.00	2.55	
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34	
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00	
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97	
Total BTEX	<0.300	0.300	12/10/2019	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	96.0	16.0	12/09/2019	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	12/10/2019	ND	229	115	200	6.53	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	237	119	200	6.41	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 92.4 % 41-142

Surrogate: 1-Chlorooctadecane 89.8 % 37.6-147

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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 5 A (H904094-33)**

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	12/10/2019	ND	2.09	104	2.00	2.55		
Toluene*	<0.050	0.050	12/10/2019	ND	2.04	102	2.00	2.34		
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	2.00	100	2.00	3.00		
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.87	97.9	6.00	3.97		
Total BTX	<0.300	0.300	12/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	368	16.0	12/09/2019	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	12/09/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 6 (H904094-34)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTEX	<0.300	0.300	12/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 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	304	16.0	12/09/2019	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	12/09/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 7 (H904094-35)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06	
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99	
Total BTEX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 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	12/09/2019	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	12/09/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 8 (H904094-36)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTX	<0.300	0.300	12/09/2019	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	12/09/2019	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	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 9 (H904094-37)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTEX	<0.300	0.300	12/09/2019	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	32.0	16.0	12/09/2019	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	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 10 A (H904094-38)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTX	<0.300	0.300	12/09/2019	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	160	16.0	12/09/2019	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	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 11 C (H904094-39)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTEx	<0.300	0.300	12/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/09/2019	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	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 12 (H904094-40)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTX	<0.300	0.300	12/09/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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**Analytical Results For:**

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

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 13 (H904094-41)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTX	<0.300	0.300	12/09/2019	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	<16.0	16.0	12/09/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: EW 14 (H904094-42)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTX	<0.300	0.300	12/09/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	12/09/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 1 A (H904094-43)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTX	<0.300	0.300	12/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/09/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 2 B (H904094-44)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTX	<0.300	0.300	12/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 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	12/09/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 99.9 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 3 A (H904094-45)**

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	12/09/2019	ND	1.86	92.9	2.00	2.06		
Toluene*	<0.050	0.050	12/09/2019	ND	1.82	90.8	2.00	2.88		
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.84	92.1	2.00	2.95		
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.56	92.7	6.00	2.99		
Total BTX	<0.300	0.300	12/09/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	12/09/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	226	113	200	2.18	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	233	116	200	0.803	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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**Analytical Results For:**

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 LANCE CRENSHAW  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/04/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 4 (H904094-46)**

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	12/10/2019	ND	1.74	87.1	2.00	12.2		
Toluene*	<0.050	0.050	12/10/2019	ND	1.69	84.7	2.00	12.9		
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	1.73	86.5	2.00	12.5		
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.25	87.4	6.00	12.4		
Total BTEX	<0.300	0.300	12/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 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	12/09/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	225	113	200	1.94	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	228	114	200	3.10	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 5 (H904094-47)**

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	12/10/2019	ND	1.74	87.1	2.00	12.2	
Toluene*	<0.050	0.050	12/10/2019	ND	1.69	84.7	2.00	12.9	
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	1.73	86.5	2.00	12.5	
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.25	87.4	6.00	12.4	
Total BTX	<0.300	0.300	12/10/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	12/09/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	225	113	200	1.94	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	228	114	200	3.10	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/06/2019	Sampling Date:	12/05/2019
Reported:	12/11/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 / PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 6 B (H904094-48)**

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	12/10/2019	ND	1.74	87.1	2.00	12.2	
Toluene*	<0.050	0.050	12/10/2019	ND	1.69	84.7	2.00	12.9	
Ethylbenzene*	<0.050	0.050	12/10/2019	ND	1.73	86.5	2.00	12.5	
Total Xylenes*	<0.150	0.150	12/10/2019	ND	5.25	87.4	6.00	12.4	
Total BTX	<0.300	0.300	12/10/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/10/2019	ND	225	113	200	1.94	
DRO >C10-C28*	<10.0	10.0	12/10/2019	ND	228	114	200	3.10	
EXT DRO >C28-C36	<10.0	10.0	12/10/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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### Notes and Definitions

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

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

---

Celey D. Keene, Lab Director/Quality Manager

55 jo 15 e9d

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

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

Company Name: Goodnight Midstream		P.O. #:		<b>BILL TO</b>								<b>ANALYSIS REQUEST</b>																													
Project Manager: Lance Crenshaw		Company: Etech																																							
Address:		City:		State:		Zip:		Attn:																																	
Phone #:		Fax #:		Project Owner:		City:		State:		Zip:																															
Project Name: Wrigley to Piper Pipeline		Project Location: Lea County		Phone #:		Fax #:																																			
Sampler Name: Matt Grieco		FOR LAB USE ONLY		PRESERV.		SAMPLING																																			
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL :		OTHER :		DATE		TIME		Chlorides		TPH 8015 M		BTEX		Texas TPH		Complete Cations/Anions		TDS	
1		FS1		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
2		FS2		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
3		FS3		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
4		FS4		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
5		FS5		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
6		FS6		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
7		FS7		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
8		FS8		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
9		FS9		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					
10		FS10		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓					

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Relinquished By: *[Signature]* Date: 12-6-19 Time: 14:36 Received By: *[Signature]* Date: 12-6-19 Time: 14:36

Delivered By: (Circle One) -0.9% #97 Sample Condition Cool Intact Yes Yes No No CHECKED BY: (Initials) YS

Sampler - UPS - Bus - Other: *[Signature]* -0.9% ☐ Yes ☐ No ☐ Yes ☐ No

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

Phone Result: ☐ Yes ☒ No Add'l Phone #:   
 Fax Result: ☐ Yes ☒ No Add'l Fax #:   
 REMARKS: email results pm@etechnv.com





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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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55 jo 33 eba

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

Company Name: Goodnight Midstream		P.O. #:		<b>BILL TO</b>												<b>ANALYSIS REQUEST</b>													
Project Manager: Lance Crenshaw		Company: Etech																											
Address:		Attn:																											
City:		State:		Zip:																									
Phone #:		Fax #:		Address:																									
Project #: 11488		Project Owner:		City:																									
Project Name: Wrigley to Piper Pipeline		State:		Zip:																									
Project Location: Lea County		Phone #:		Fax #:																									
Sampler Name: Matt Grileo																													

FOR LAB USE ONLY		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX						PRESERV		SAMPLING														
Lab I.D.	Sample I.D.					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS						
4964094	31	WW5A	G	1											12/3/19	08:33	✓	✓	✓									
	32	WW6	G	1											12/3/19	08:39	✓	✓	✓									
	33	WW7	G	1											12/3/19	08:42	✓	✓	✓									
	34	WW8	G	1											12/3/19	08:53	✓	✓	✓									
	35	WW9	G	1											12/3/19	09:04	✓	✓	✓									
	36	WW10	G	1											12/3/19	09:16	✓	✓	✓									
	37	WW11A	G	1											12/4/19	09:27	✓	✓	✓									
	38	NW1A	G	1											12/4/19	08:03	✓	✓	✓									
	39	EW1B	G	1											12/4/19	10:48	✓	✓	✓									
	30	EW2A	G	1											12/4/19	11:54	✓	✓	✓									

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Relinquished By:	Date: 12-6-19	Received By:	Date: 12-6-19	Time: 14:30	Time: 14:30
Relinquished By:		Received By:			

Delivered By: (Circle One)	-0.9' #97	Sample Condition	Cool	Intact	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Cardinal - 0.5'	Yes	Yes	Yes	Yes
		No	No	No	No

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email results pm@etechenv.com

REMARKS:

Phone Result: ☐ Yes ☒ No Add'l Phone #:

Fax Result: ☐ Yes ☒ No Add'l Fax #:



55 jo 45 ebaD

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

<b>Company Name:</b> Goodnight Midstream		<b>P.O. #:</b>		<b>BILL TO</b>										<b>ANALYSIS REQUEST</b>											
<b>Project Manager:</b> Lance Crenshaw		<b>Company:</b> Etech																							
<b>Address:</b>		<b>Attn:</b>																							
<b>City:</b>		<b>State:</b>		<b>Zip:</b>																					
<b>Phone #:</b>		<b>Fax #:</b>		<b>Address:</b>																					
<b>Project #:</b> 11488		<b>Project Owner:</b>		<b>City:</b>																					
<b>Project Name:</b> Wrigley to Piper Pipeline		<b>State:</b>		<b>Zip:</b>																					
<b>Project Location:</b> Lea County		<b>Phone #:</b>		<b>Fax #:</b>																					
<b>Sampler Name:</b> Matt Grieco																									
<b>FOR LAB USE ONLY</b>																									
<b>Lab I.D.</b>	<b>Sample I.D.</b>	<b>(G)RAB OR (C)OMP.</b>	<b># CONTAINERS</b>	<b>MATRIX</b>					<b>PRESERV.</b>	<b>SAMPLING</b>															
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE																	
				OTHER :	ACID/BASE:	ICE / COOL	OTHER :																		
				DATE	TIME																				
				31	EW3A	G	1	✓				✓	12/4/19	08:31	✓	✓	✓								
				32	EW4	G	1	✓				✓	12/4/19	08:37	✓	✓	✓								
				33	EW5A	G	1	✓				✓	12/4/19	08:40	✓	✓	✓								
				34	EW6	G	1	✓				✓	12/4/19	08:52	✓	✓	✓								
				35	EW7	G	1	✓				✓	12/4/19	09:05	✓	✓	✓								
				36	EW8	G	1	✓				✓	12/4/19	09:15	✓	✓	✓								
				37	EW9	G	1	✓				✓	12/5/19	09:30	✓	✓	✓								
				38	EW10A	G	1	✓				✓	12/5/19	08:05	✓	✓	✓								
				39	EW11C	G	1	✓				✓	12/5/19	10:50	✓	✓	✓								
40	EW12	G	1	✓		✓	12/5/19	11:55	✓	✓	✓														

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**Relinquished By:** 12-6-19 14:30 Received By: pm@etechenv.com

**Relinquished By:** 12-6-19 14:30 Received By: pm@etechenv.com

**Delivered By: (Circle One)** -0.9c #47 **Sample Condition** ☒ Cool ☒ Intact ☐ Yes ☐ No

**Sampler - UPS - Bus - Other:** Cardinal -0.5c ☐ Yes ☐ No

**CHECKED BY:** pm@etechenv.com (Initials)

**REMARKS:** email results

**Phone Result:** ☐ Yes ☒ No **Add'l Phone #:**

**Fax Result:** ☐ Yes ☒ No **Add'l Fax #:**

**email results**

**pm@etechenv.com**

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55 jo 55 eba

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

<b>Company Name:</b> Goodnight Midstream		<b>P.O. #:</b>		<b>BILL TO</b>										<b>ANALYSIS REQUEST</b>																											
<b>Project Manager:</b> Lance Crenshaw		<b>Company:</b> Etech																																							
<b>Address:</b>		<b>Attn:</b>																																							
<b>City:</b>		<b>State:</b>		<b>Zip:</b>																																					
<b>Phone #:</b>		<b>Fax #:</b>		<b>Address:</b>																																					
<b>Project #:</b> 11488		<b>Project Owner:</b>		<b>City:</b>																																					
<b>Project Name:</b> Wrigley to Piper Pipeline		<b>State:</b>		<b>Zip:</b>																																					
<b>Project Location:</b> Lea County		<b>Phone #:</b>		<b>Fax #:</b>																																					
<b>Sample Name:</b> Matt Grieco		<b>FOR LAB USE ONLY</b>																																							
<b>Lab I.D.</b>		<b>Sample I.D.</b>		<b>(G)RAB OR (C)OMP.</b>		<b># CONTAINERS</b>		<b>GROUNDWATER</b>		<b>WASTEWATER</b>		<b>SOIL</b>		<b>OIL</b>		<b>SLUDGE</b>		<b>OTHER :</b>		<b>ACID/BASE:</b>		<b>ICE / COOL</b>		<b>OTHER :</b>		<b>DATE</b>		<b>TIME</b>		<b>Chlorides</b>		<b>TPH 8015 M</b>		<b>BTEX</b>		<b>Texas TPH</b>		<b>Complete Cations/Anions</b>		<b>TDS</b>	
41		EW13		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
42		EW14		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
43		SW1A		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
44		SW2B		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
45		SW3A		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
46		SW4		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
47		SW5		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
48		SW6B		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			

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**Relinquished By:****Date:** 12-6-19 **Received By:****Time:** 14:30**Relinquished By:****Date:** 12-6-19 **Received By:****Time:** 14:30**Delivered By: (Circle One)****Date:** 12-6-19 **Received By:****Sampler - UPS - Bus - Other:****Date:** 12-6-19 **Received By:****Sample Condition****Intact****Yes****No****Checked By:****Phone Result:****Yes****No****Add'l Phone #:****Fax Result:****Yes****No****Add'l Fax #:**

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---

December 16, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: WRIGLEY TO PIPER

Enclosed are the results of analyses for samples received by the laboratory on 12/10/19 16:05.

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 "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS17 (H904133-01)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTEX	<0.300	0.300	12/11/2019	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	16.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 93.8 % 41-142

Surrogate: 1-Chlorooctadecane 98.6 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS18 (H904133-02)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 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	2680	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS19 (H904133-03)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS20 (H904133-04)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTEX	<0.300	0.300	12/11/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1500	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS21 (H904133-05)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1180	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS22 (H904133-06)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5160	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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**Analytical Results For:**

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS23 (H904133-07)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 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	3160	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	177	88.5	200	9.44	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	181	90.4	200	9.81	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 99.1 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/06/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS24 (H904133-08)**

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	12/11/2019	ND	1.92	95.9	2.00	1.51	
Toluene*	<0.050	0.050	12/11/2019	ND	1.87	93.7	2.00	1.50	
Ethylbenzene*	<0.050	0.050	12/11/2019	ND	1.91	95.6	2.00	1.10	
Total Xylenes*	<0.150	0.150	12/11/2019	ND	5.80	96.7	6.00	0.950	
Total BTX	<0.300	0.300	12/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 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	1120	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 81.1 % 41-142

Surrogate: 1-Chlorooctadecane 83.0 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS25 (H904133-09)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 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	1600	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 82.6 % 41-142

Surrogate: 1-Chlorooctadecane 84.3 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS26 (H904133-10)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13		
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02		
Total BTEX	<0.300	0.300	12/12/2019	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	1920	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 82.1 % 41-142

Surrogate: 1-Chlorooctadecane 83.7 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS27 (H904133-11)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	1980	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 83.6 % 41-142

Surrogate: 1-Chlorooctadecane 85.4 % 37.6-147

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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS28 (H904133-12)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2400	16.0	12/11/2019	ND	416	104	400	0.00	QM-07	

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	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 81.2 % 41-142

Surrogate: 1-Chlorooctadecane 82.4 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS29 (H904133-13)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 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	2920	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 85.0 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS30 (H904133-14)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 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	3120	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 82.2 % 41-142

Surrogate: 1-Chlorooctadecane 83.8 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS31 (H904133-15)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 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	2720	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 86.4 % 41-142

Surrogate: 1-Chlorooctadecane 88.4 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS32 (H904133-16)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 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	2440	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 84.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.1 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS33 (H904133-17)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13		
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02		
Total BTEx	<0.300	0.300	12/12/2019	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	64.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 83.2 % 41-142

Surrogate: 1-Chlorooctadecane 83.8 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS34 (H904133-18)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTEx	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 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	272	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 75.5 % 41-142

Surrogate: 1-Chlorooctadecane 76.7 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS35 (H904133-19)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 75.6 % 41-142

Surrogate: 1-Chlorooctadecane 76.7 % 37.6-147

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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS36 (H904133-20)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	848	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 71.1 % 41-142

Surrogate: 1-Chlorooctadecane 71.9 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS37 (H904133-21)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 75.6 % 41-142

Surrogate: 1-Chlorooctadecane 76.6 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS38 (H904133-22)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13		
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02		
Total BTX	<0.300	0.300	12/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 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	224	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 77.0 % 41-142

Surrogate: 1-Chlorooctadecane 77.8 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS39 (H904133-23)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13		
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02		
Total BTEx	<0.300	0.300	12/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 77.6 % 41-142

Surrogate: 1-Chlorooctadecane 77.7 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS40 (H904133-24)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 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	4520	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 74.6 % 41-142

Surrogate: 1-Chlorooctadecane 76.0 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS41 (H904133-25)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTEX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 75.7 % 41-142

Surrogate: 1-Chlorooctadecane 76.7 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS42 (H904133-26)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13		
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02		
Total BTX	<0.300	0.300	12/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 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	64.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 78.2 % 41-142

Surrogate: 1-Chlorooctadecane 79.9 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS43 (H904133-27)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	368	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/11/2019	ND	165	82.6	200	19.1	
DRO >C10-C28*	<10.0	10.0	12/11/2019	ND	177	88.7	200	18.9	
EXT DRO >C28-C36	<10.0	10.0	12/11/2019	ND					

Surrogate: 1-Chlorooctane 77.4 % 41-142

Surrogate: 1-Chlorooctadecane 79.4 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS44 (H904133-28)**

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	12/12/2019	ND	1.94	97.1	2.00	1.13	
Toluene*	<0.050	0.050	12/12/2019	ND	1.88	93.8	2.00	1.14	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	1.90	95.2	2.00	0.998	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.77	96.2	6.00	1.02	
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 85.3 % 41-142

Surrogate: 1-Chlorooctadecane 87.0 % 37.6-147

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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS45 (H904133-29)**

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	12/12/2019	ND	2.07	103	2.00	1.27	QR-03
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	QR-03
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	QR-03
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	QR-03
Total BTX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 89.2 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS46 (H904133-30)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	592	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 89.1 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS47 (H904133-31)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	448	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 88.1 % 41-142

Surrogate: 1-Chlorooctadecane 91.3 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW2 (H904133-32)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTEX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.5 % 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	80.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 90.2 % 41-142

Surrogate: 1-Chlorooctadecane 91.2 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW3A (H904133-33)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTEX	<0.300	0.300	12/12/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW4 (H904133-34)**

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	12/13/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/13/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/13/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/13/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	352	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW5A (H904133-35)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	192	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 91.9 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW6 (H904133-36)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	400	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.4 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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**Analytical Results For:**

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

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW7A (H904133-37)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTX	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	272	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 91.9 % 41-142

Surrogate: 1-Chlorooctadecane 93.3 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW8 (H904133-38)**

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	12/13/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/13/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/13/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/13/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/13/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 85.1 % 41-142

Surrogate: 1-Chlorooctadecane 87.3 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW15B (H904133-39)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 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	272	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 86.5 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

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Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW7C (H904133-40)**

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	12/12/2019	ND	2.07	103	2.00	1.27		
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636		
Total BTX	<0.300	0.300	12/12/2019	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	16.0	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

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Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW8 (H904133-41)**

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	12/13/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/13/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/13/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/13/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 94.6 % 41-142

Surrogate: 1-Chlorooctadecane 94.8 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW9 (H904133-42)**

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	12/12/2019	ND	2.07	103	2.00	1.27		
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239		
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648		
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636		
Total BTX	<0.300	0.300	12/12/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	12/11/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 88.3 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW13 (H904133-43)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTEX	<0.300	0.300	12/12/2019	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	16.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.3 % 41-142

Surrogate: 1-Chlorooctadecane 92.4 % 37.6-147

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Received:	12/10/2019	Sampling Date:	12/09/2019
Reported:	12/16/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: WW14 (H904133-44)**

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	12/12/2019	ND	2.07	103	2.00	1.27	
Toluene*	<0.050	0.050	12/12/2019	ND	2.09	105	2.00	0.239	
Ethylbenzene*	<0.050	0.050	12/12/2019	ND	2.03	101	2.00	0.648	
Total Xylenes*	<0.150	0.150	12/12/2019	ND	5.87	97.9	6.00	0.636	
Total BTEx	<0.300	0.300	12/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	96.0	16.0	12/11/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	164	82.1	200	13.7	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	174	87.2	200	17.9	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.1 % 37.6-147

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### Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

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: Goodnight Midstream		P.O. #:		<b>BILL TO</b>																																			
Project Manager: Lance Crenshaw		Company: Etech		<b>ANALYSIS REQUEST</b>																																			
Address:		Attn:																																					
City:		Address:																																					
Phone #:		City:																																					
Project #: 11488		State:																																					
Project Name: Wrigley to Piper		Zip:																																					
Project Location: Lea County		Phone #:																																					
Sampler Name: Matt Grieco		Fax #:																																					
FOR LAB USE ONLY		PRESERV		SAMPLING																																			
Lab I.D.		Sample I.D.																																					
HQD4133		(G)RAB OR (C)OMP		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		Chlorides		TPH 8015 M		BTEX		Texas TPH		Complete Cations/Anions		TDS	
1		FS17		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
2		FS18		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
3		FS19		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
4		FS20		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
5		FS21		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
6		FS22		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
7		FS23		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
8		FS24		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
9		FS25		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
10		FS26		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			

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Relinquished By: *[Signature]* Date: *4/10/19* Time: *16:05* Received By: *[Signature]* Date: *4/10/19* Time: *16:05*

Relinquished By: *[Signature]* Date: *4/10/19* Time: *16:05* Received By: *[Signature]* Date: *4/10/19* Time: *16:05*

Delivered By: (Circle One) *UPS* *09:02 / 1:32* *#47* Sample Condition ☒ Cool ☒ Intact ☒ Yes ☒ No ☒ No

Sampler - UPS - Bus - Other: *09:02 / 1:32* *#47* ☒ Yes ☒ No ☒ No

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

Phone Result: ☐ Yes ☒ No Add'l Phone #: *pm@etechnv.com*

Fax Result: ☐ Yes ☒ No Add'l Fax #: *pm@etechnv.com*

REMARKS: *email results*



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

Company Name: Goodnight Midstream		P.O. #:		<b>BILL TO</b>																									
Project Manager: Lance Crenshaw		Company: Etch		<b>ANALYSIS REQUEST</b>																									
Address:		Attn:																											
City:		State:		Zip:																									
Phone #:		Fax #:		Address:																									
Project #: 11488		Project Owner:		City:		State:		Zip:																					
Project Name: Wrigley to Piper		State:		City:		State:		Zip:																					
Project Location: Lea County		Phone #:		Fax #:																									
Sampler Name: Matt Grieco		FOR LAB USE ONLY																											
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME	
HP04133		11		FS27		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
12		FS28		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
13		FS29		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
14		FS30		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
15		FS31		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
16		FS32		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
17		FS33		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
18		FS34		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
19		FS35		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	
20		FS36		G		1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓	

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Relinquished By:	Date: 12/10/19	Received By:	Date: 12/10/19	Time: 10:05	Signature: [Signature]
Relinquished By:	Date:	Received By:	Date:	Time:	Signature:

Delivered By: (Circle One) ☒ UPS ☐ Other: Dye 1.32 #47

Sampler - UPS - Bus - Other: Dye 1.32 #47

Sample Condition: ☒ Intact ☐ Cool ☐ Yes ☐ No

CHECKED BY: [Signature]

Phone Result: ☐ Yes ☒ No Add'l Phone #: pm@etechenv.com

Fax Result: ☐ Yes ☒ No Add'l Fax #:

REMARKS: email results

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

<b>Company Name:</b> Goodnight Midstream		<b>P.O. #:</b>		<b>BILL TO</b>							
<b>Project Manager:</b> Lance Crenshaw		<b>Company:</b> Etech									
<b>Address:</b>		<b>Attn:</b>		<b>ANALYSIS REQUEST</b>							
<b>City:</b>		<b>Address:</b>									
<b>State:</b>		<b>City:</b>									
<b>Zip:</b>		<b>State:</b>									
<b>Phone #:</b>		<b>Fax #:</b>									
<b>Project #:</b> 11488		<b>Project Owner:</b>									
<b>Project Name:</b> Wrigley to Piper		<b>State:</b>									
<b>Project Location:</b> Lea County		<b>Phone #:</b>									
<b>Sampler Name:</b> Matt Grieco		<b>Fax #:</b>									
<b>FOR LAB USE ONLY</b>		<b>PRESERV</b>		<b>SAMPLING</b>							
<b>Lab I.D.</b>	<b>Sample I.D.</b>	<b>(G)RAB OR (C)OMP.</b>		<b># CONTAINERS</b>		<b>MATRIX</b>		<b>DATE</b>		<b>TIME</b>	
H904133											
21	FS37	G 1		✓				12/9/19		✓	
22	FS38	G 1		✓				12/9/19		✓	
23	FS39	G 1		✓				12/9/19		✓	
24	FS40	G 1		✓				12/9/19		✓	
25	FS41	G 1		✓				12/9/19		✓	
26	FS42	G 1		✓				12/9/19		✓	
27	FS43	G 1		✓				12/9/19		✓	
28	FS44	G 1		✓				12/9/19		✓	
29	FS45	G 1		✓				12/9/19		✓	
30	FS46	G 1		✓				12/9/19		✓	
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<b>Relinquished By:</b>		<b>Date:</b> 12/10/19		<b>Received By:</b>		<b>Sample Condition</b>		<b>CHECKED BY:</b>		<b>REMARKS:</b>	
[Signature]		Time: 10:05		[Signature]		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>		[Signature]		email results	
<b>Relinquished By:</b>		<b>Date:</b>		<b>Received By:</b>		<b>Sample Condition</b>		<b>CHECKED BY:</b>		<b>REMARKS:</b>	
		Time:				Cool <input type="checkbox"/> Intact <input type="checkbox"/>				pm@etecheny.com	
<b>Delivered By: (Circle One)</b>		<b>Sampler - UPS - Bus - Other:</b> D.96/1.30 #97		<b>Sample Condition</b>		<b>CHECKED BY:</b>		<b>REMARKS:</b>			

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

[illegible]

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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Goodnight Midstream		P.O. #:		BILL TO										ANALYSIS REQUEST																											
Project Manager: Lance Crenshaw		Company: Electch																																							
Address:		Attn:																																							
City:		Address:																																							
State:		City:																																							
Zip:		State:																																							
Phone #:		Zip:																																							
Fax #:		Phone #:																																							
Project #: 11488		Project Owner:																																							
Project Name: Wrigley to Piper		State:																																							
Project Location: Lea County		Zip:																																							
Sample Name: Matt Grieco		Fax #:																																							
FOR LAB USE ONLY		PRESERV		SAMPLING																																					
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		Chlorides		TPH 8015 M		BTEX		Texas TPH		Complete Cations/Anions		TDS	
H904133		41		SW8		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
42		SW9		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
43		WW13		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			
44		WW14		G 1		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓		✓			

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Relinquished By: *[Signature]* Date: 12/10/19 Time: 16:05 Received By: *[Signature]* Date: 12/10/19 Time: 16:05

Relinquished By: *[Signature]* Date: 12/10/19 Time: 16:05 Received By: *[Signature]* Date: 12/10/19 Time: 16:05

Delivered By: (Circle One) ☒ Cool ☐ Intact ☐ Sample Condition ☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No

Sampler - UPS - Bus - Other: 0.92 / 1.32 #97

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email results pm@etechnv.com

REMARKS:

Phone Result: ☐ Yes ☒ No Add'l Phone #:   
 Fax Result: ☐ Yes ☒ No Add'l Fax #:   
 email results



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

---

December 17, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: WRIGLEY TO PIPER

Enclosed are the results of analyses for samples received by the laboratory on 12/11/19 16:55.

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 "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS48 (H904154-01)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTEX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	208	16.0	12/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 90.2 % 41-142

Surrogate: 1-Chlorooctadecane 88.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS49 (H904154-02)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3		
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5		
Total BTX	<0.300	0.300	12/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	1730	16.0	12/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.5 % 41-142

Surrogate: 1-Chlorooctadecane 92.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS50 (H904154-03)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	12/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 96.2 % 37.6-147

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\*=Accredited Analyte

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS51 (H904154-04)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	608	16.0	12/16/2019	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 98.1 % 41-142

Surrogate: 1-Chlorooctadecane 98.1 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS52 (H904154-05)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3		
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5		
Total BTX	<0.300	0.300	12/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	2400	16.0	12/16/2019	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 96.7 % 41-142

Surrogate: 1-Chlorooctadecane 97.5 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS53 (H904154-06)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/14/2019	ND	1.79	89.6	2.00	11.3		
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5		
Total BTX	<0.300	0.300	12/14/2019	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	96.0	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.8 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS54 (H904154-07)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	320	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 83.3 % 41-142

Surrogate: 1-Chlorooctadecane 82.3 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS55 (H904154-08)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3		
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5		
Total BTX	<0.300	0.300	12/16/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.2 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS56 (H904154-09)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	224	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 96.4 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS57 (H904154-10)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	112	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 93.0 % 41-142

Surrogate: 1-Chlorooctadecane 89.7 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS58 (H904154-11)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	48.0	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.9 % 37.6-147

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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS59 (H904154-12)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	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	32.0	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 91.0 % 41-142

Surrogate: 1-Chlorooctadecane 87.7 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS60 (H904154-13)**

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	12/14/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/14/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/14/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	144	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 88.7 % 41-142

Surrogate: 1-Chlorooctadecane 84.0 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS61 (H904154-14)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3		
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5		
Total BTX	<0.300	0.300	12/16/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/12/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/12/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/12/2019	ND					

Surrogate: 1-Chlorooctane 98.0 % 41-142

Surrogate: 1-Chlorooctadecane 97.9 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW9A (H904154-15)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3		
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5		
Total BTX	<0.300	0.300	12/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	144	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	170	84.9	200	11.5	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	171	85.7	200	11.4	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 94.8 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW10 (H904154-16)**

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	12/16/2019	ND	1.79	89.6	2.00	11.3	
Toluene*	<0.050	0.050	12/16/2019	ND	1.77	88.3	2.00	11.8	
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.79	89.3	2.00	12.3	
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.22	87.0	6.00	11.5	
Total BTX	<0.300	0.300	12/16/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 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	144	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 71.7 % 41-142

Surrogate: 1-Chlorooctadecane 73.1 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW11B (H904154-17)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6	QR-03
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5	QR-03, QM-07
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0	QR-03, QM-07
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0	QR-03, QM-07
Total BTX	<0.300	0.300	12/14/2019	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	64.0	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 76.5 % 41-142

Surrogate: 1-Chlorooctadecane 78.2 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW12 (H904154-18)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTEX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	48.0	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 79.2 % 41-142

Surrogate: 1-Chlorooctadecane 81.5 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW13 (H904154-19)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTEX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	144	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 78.8 % 41-142

Surrogate: 1-Chlorooctadecane 80.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW14 (H904154-20)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	304	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 78.6 % 41-142

Surrogate: 1-Chlorooctadecane 80.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW10 (H904154-21)**

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	12/16/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/16/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.08	84.7	6.00	16.0		
Total BTX	<0.300	0.300	12/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 75.2 % 41-142

Surrogate: 1-Chlorooctadecane 77.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW11A (H904154-22)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 80.3 % 41-142

Surrogate: 1-Chlorooctadecane 81.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW12 (H904154-23)**

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	12/16/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/16/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/16/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/16/2019	ND	5.08	84.7	6.00	16.0		
Total BTX	<0.300	0.300	12/16/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	12/16/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 77.9 % 41-142

Surrogate: 1-Chlorooctadecane 79.2 % 37.6-147

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**Analytical Results For:**

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

Received:	12/11/2019	Sampling Date:	12/10/2019
Reported:	12/17/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488	Sample Received By:	Jodi Henson
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW13 (H904154-24)**

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	12/14/2019	ND	1.76	88.2	2.00	12.6		
Toluene*	<0.050	0.050	12/14/2019	ND	1.73	86.7	2.00	17.5		
Ethylbenzene*	<0.050	0.050	12/14/2019	ND	1.75	87.7	2.00	16.0		
Total Xylenes*	<0.150	0.150	12/14/2019	ND	5.08	84.7	6.00	16.0		
Total BTX	<0.300	0.300	12/14/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	96.0	16.0	12/16/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/13/2019	ND	212	106	200	1.12	
DRO >C10-C28*	<10.0	10.0	12/13/2019	ND	231	116	200	1.59	
EXT DRO >C28-C36	<10.0	10.0	12/13/2019	ND					

Surrogate: 1-Chlorooctane 76.2 % 41-142

Surrogate: 1-Chlorooctadecane 78.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager




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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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 Celey D. Keene, Lab Director/Quality Manager





101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 773-2476 (935) 673-7001 FAX (325) 673-7020

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Goodnight Midstream										P.O. #:		BILL TO										ANALYSIS REQUEST									
Project Manager: Lance Crenshaw										Company: Etech																					
Address:										Attn:																					
City:										Address:																					
Phone #:										City:																					
Project #: 11488										State:																					
Project Name: Wrigley to Piper Pipeline										Zip:																					
Project Location: Lea County										Phone #:																					
Fax #:																															
Sample Name: Matt Grieco										PRESERV		SAMPLING																			
FOR LAB USE ONLY																															
Lab I.D.										(G)RAB OR (C)OMP.																					
Sample I.D.										# CONTAINERS																					
										GROUNDWATER																					
										WASTEWATER																					
										SOIL																					
										OIL																					
										SLUDGE																					
										OTHER :																					
										ACID/BASE:																					
										ICE / COOL																					
										OTHER :																					
										DATE																					
										TIME																					
H904134										✓																					
01 FS48										G 1		12/10/19										✓									
02 FS49										G 1		12/10/19										✓									
03 FS50										G 1		12/10/19										✓									
04 FS51										G 1		12/10/19										✓									
05 FS52										G 1		12/10/19										✓									
06 FS53										G 1		12/10/19										✓									
07 FS54										G 1		12/10/19										✓									
08 FS55										G 1		12/10/19										✓									
09 FS56										G 1		12/10/19										✓									
10 FS57										G 1		12/10/19										✓									
PLEASE NOTE: Liability and Damages, Cardman'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 services. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardman within 30 days after completion of the applicable service. In no event shall Cardman be liable for incidental or consequential damages, including without limitation, business interruption, 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 rendered by Cardman, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																															
Relinquished By:										Date: 12/11/19		Received By: Heidi Henderson																			
Time: 10:55																															
Relinquished By:										Date:		Received By:																			
Time:																															
Delivered By: (Circle One)										Sample Condition		CHECKED BY: (Initials)																			
-2.12/-1.12 #97										Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>																					
-2.12/-1.12 #97										Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>																					
-2.12/-1.12 #97										Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>																					
Delivered By: (Circle One)										Sample Condition		CHECKED BY: (Initials)																			
-2.12/-1.12 #97										Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>																					
-2.12/-1.12 #97										Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>																					
-2.12/-1.12 #97										Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>																					
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-2.12/-1.12 #97										Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>																					
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-2.12/-1.12 #97										Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>																					
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-2.12/-1.12 #97										Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>																					
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Delivered By: (Circle One)										Sample Condition		CHECKED BY: (Initials)																			
-2.12/-1.12 #97										Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>																					
-2.12/-1.12 #97										Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>																					
-2.12/-1.12 #97										Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>																					
Delivered By: (Circle One)										Sample Condition		CHECKED BY: (Initials)																			
-2.12/-1.12 #97										Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>																					
-2.12/-1.12 #97										Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>																					
-2.12/-1.12 #97										Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>																					
Delivered By: (Circle One)										Sample Condition		CHECKED BY: (Initials)																			
-2.12/-1.12 #97										Cool <input checked="" type="checkbox"/>																					

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



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 (505) 323-7004 FAX (254) 720-7020

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

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Goodnight Midstream										P.O. #:		BILL TO										ANALYSIS REQUEST									
Project Manager: Lance Crenshaw										Company: Etech																					
Address:										Attn:																					
City:										Address:																					
Phone #:										City:																					
Project #:										State:																					
Project Name: Wrigley to Piper Pipeline										Zip:																					
Project Location: Lea County										Phone #:																					
Sample Name: Matt Grieco										Fax #:																					
FOR LAB USE ONLY										PRESERV.		SAMPLING																			
Lab I.D.										DATE		TIME																			
Sample I.D.										DATE		TIME																			
H904154										DATE		TIME																			
11										DATE		TIME																			
FS58										DATE		TIME																			
12										DATE		TIME																			
FS59										DATE		TIME																			
13										DATE		TIME																			
FS60										DATE		TIME																			
14										DATE		TIME																			
FS61										DATE		TIME																			
15										DATE		TIME																			
NW9A										DATE		TIME																			
16										DATE		TIME																			
NW10										DATE		TIME																			
17										DATE		TIME																			
NW11B										DATE		TIME																			
18										DATE		TIME																			
NW12										DATE		TIME																			
19										DATE		TIME																			
NW13										DATE		TIME																			
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† 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**

Company Name: Goodnight Midstream  
 Project Manager: Lance Crenshaw

Address:

City: State: Zip:

Phone #: Fax #:

Project #: 11488 Project Owner:

Project Name: Wrigley to Piper Pipeline

Project Location: Lea County

Sample Name: Matt Grieco

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

1190454-

21 SW10  
 22 SW11A  
 23 SW12  
 24 SW13

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

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TIME

DATE

TIME

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Chlorides

TPH 8015 M

BTEX

Texas TPH

Complete Cations/Anions

TDS

**ANALYSIS REQUEST**

P.O. #:

Company: Elech

Attn:

Address:

City:

State: Zip:

Phone #:

Fax #:

**BILL TO**

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Relinquished By: Date: 12/11/19 Received By: Date: 12/11/19

Relinquished By: Date: 12/11/19 Received By: Date: 12/11/19

Relinquished By: Date: 12/11/19 Received By: Date: 12/11/19

Relinquished By: Date: 12/11/19 Received By: Date: 12/11/19

Relinquished By: Date: 12/11/19 Received By: Date: 12/11/19

Delivered By: (Circle One) -2.10/-1.70 #97 Sample Condition Cool Intact Yes Yes No No

pm@etechnv.com

email results

REMARKS:

Phone Result: Yes Yes No No Add'l Phone #: Fax Result: Yes Yes No No Add'l Fax #:



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---

December 19, 2019

LANCE CRENSHAW

Etech Environmental & Safety Solutions

P.O. Box 301

Lovington, NM 88260

RE: WRIGLEY TO PIPER

Enclosed are the results of analyses for samples received by the laboratory on 12/13/19 15:24.

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 "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 62A (H904184-01)**

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	12/17/2019	ND	1.83	91.4	2.00	9.80	
Toluene*	<0.050	0.050	12/17/2019	ND	1.79	89.7	2.00	10.8	
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.82	91.2	2.00	10.3	
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.29	88.2	6.00	10.4	
Total BTEX	<0.300	0.300	12/17/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	144	16.0	12/16/2019	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	12/16/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/16/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/16/2019	ND					

Surrogate: 1-Chlorooctane 75.8 % 41-142

Surrogate: 1-Chlorooctadecane 80.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 63 (H904184-02)**

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	12/17/2019	ND	1.99	99.3	2.00	7.30		
Toluene*	<0.050	0.050	12/17/2019	ND	1.98	98.9	2.00	6.84		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	2.00	100	2.00	7.58		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.84	97.3	6.00	7.66		
Total BTEx	<0.300	0.300	12/17/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/16/2019	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	12/16/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/16/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/16/2019	ND					

Surrogate: 1-Chlorooctane 76.7 % 41-142

Surrogate: 1-Chlorooctadecane 81.9 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 64 (H904184-03)**

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/17/2019	ND	1.99	99.3	2.00	7.30		
Toluene*	<0.050	0.050	12/17/2019	ND	1.98	98.9	2.00	6.84		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	2.00	100	2.00	7.58		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.84	97.3	6.00	7.66		
Total BTEx	<0.300	0.300	12/17/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 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	48.0	16.0	12/16/2019	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	12/16/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/16/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/16/2019	ND					

Surrogate: 1-Chlorooctane 73.1 % 41-142

Surrogate: 1-Chlorooctadecane 75.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 65 (H904184-04)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67		
Total BTX	<0.300	0.300	12/17/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 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	48.0	16.0	12/16/2019	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	12/16/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/16/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/16/2019	ND					

Surrogate: 1-Chlorooctane 77.7 % 41-142

Surrogate: 1-Chlorooctadecane 80.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 66 (H904184-05)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67		
Total BTX	<0.300	0.300	12/17/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/16/2019	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	12/16/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/16/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/16/2019	ND					

Surrogate: 1-Chlorooctane 70.2 % 41-142

Surrogate: 1-Chlorooctadecane 73.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 67 (H904184-06)**

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/17/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67		
Total BTX	<0.300	0.300	12/17/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/16/2019	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	12/16/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/16/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/16/2019	ND					

Surrogate: 1-Chlorooctane 76.7 % 41-142

Surrogate: 1-Chlorooctadecane 80.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 68 (H904184-07)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44	
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66	
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27	
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67	
Total BTX	<0.300	0.300	12/17/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	12/16/2019	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	12/16/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/16/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/16/2019	ND					

Surrogate: 1-Chlorooctane 74.9 % 41-142

Surrogate: 1-Chlorooctadecane 79.8 % 37.6-147

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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 69 (H904184-08)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67		
Total BTX	<0.300	0.300	12/17/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/16/2019	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	12/17/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 75.7 % 41-142

Surrogate: 1-Chlorooctadecane 81.1 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 70A (H904184-09)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67		
Total BTX	<0.300	0.300	12/17/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 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	12/16/2019	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	12/17/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 76.8 % 41-142

Surrogate: 1-Chlorooctadecane 79.2 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 71 (H904184-10)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44	
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66	
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27	
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67	
Total BTX	<0.300	0.300	12/17/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 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	48.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 72.3 % 41-142

Surrogate: 1-Chlorooctadecane 75.7 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 72 (H904184-11)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67		
Total BTX	<0.300	0.300	12/17/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 72.9 % 41-142

Surrogate: 1-Chlorooctadecane 77.2 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 73 (H904184-12)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67		
Total BTX	<0.300	0.300	12/17/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 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	112	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 75.5 % 41-142

Surrogate: 1-Chlorooctadecane 79.1 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 74B (H904184-13)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67		
Total BTEx	<0.300	0.300	12/17/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 71.3 % 41-142

Surrogate: 1-Chlorooctadecane 73.0 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 75A (H904184-14)**

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	12/17/2019	ND	1.89	94.6	2.00	7.44	
Toluene*	<0.050	0.050	12/17/2019	ND	1.88	94.1	2.00	6.66	
Ethylbenzene*	<0.050	0.050	12/17/2019	ND	1.91	95.5	2.00	6.27	
Total Xylenes*	<0.150	0.150	12/17/2019	ND	5.75	95.8	6.00	5.67	
Total BTX	<0.300	0.300	12/17/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.5 % 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	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 78.0 % 41-142

Surrogate: 1-Chlorooctadecane 83.0 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 76 (H904184-15)**

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	12/18/2019	ND	1.89	94.6	2.00	7.44	
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	94.1	2.00	6.66	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.27	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.75	95.8	6.00	5.67	
Total BTX	<0.300	0.300	12/18/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	210	105	200	0.313	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	221	111	200	0.901	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 72.5 % 41-142

Surrogate: 1-Chlorooctadecane 75.4 % 37.6-147

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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: FS 77A (H904184-16)**

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	12/18/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.75	95.8	6.00	5.67		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 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	16.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 75.7 % 41-142

Surrogate: 1-Chlorooctadecane 77.6 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 15 (H904184-17)**

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	12/18/2019	ND	1.89	94.6	2.00	7.44	
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	94.1	2.00	6.66	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.27	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.75	95.8	6.00	5.67	
Total BTX	<0.300	0.300	12/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 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	224	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 76.8 % 41-142

Surrogate: 1-Chlorooctadecane 79.2 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 16A (H904184-18)**

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	12/18/2019	ND	1.89	94.6	2.00	7.44	
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	94.1	2.00	6.66	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.27	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.75	95.8	6.00	5.67	
Total BTX	<0.300	0.300	12/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 77.5 % 41-142

Surrogate: 1-Chlorooctadecane 78.4 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 17 (H904184-19)**

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	12/18/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.75	95.8	6.00	5.67		
Total BTEX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 70.1 % 41-142

Surrogate: 1-Chlorooctadecane 71.7 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 18 (H904184-20)**

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	12/18/2019	ND	1.89	94.6	2.00	7.44	
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	94.1	2.00	6.66	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.27	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.75	95.8	6.00	5.67	
Total BTX	<0.300	0.300	12/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 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	48.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 73.9 % 41-142

Surrogate: 1-Chlorooctadecane 76.1 % 37.6-147

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 LANCE CRENSHAW  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 19 (H904184-21)**

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	12/18/2019	ND	1.89	94.6	2.00	7.44		
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	94.1	2.00	6.66		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.27		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.75	95.8	6.00	5.67		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 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	144	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 77.8 % 41-142

Surrogate: 1-Chlorooctadecane 82.5 % 37.6-147

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 20A (H904184-22)**

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	12/18/2019	ND	1.89	94.6	2.00	7.44	
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	94.1	2.00	6.66	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.27	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.75	95.8	6.00	5.67	
Total BTX	<0.300	0.300	12/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 72.4 % 41-142

Surrogate: 1-Chlorooctadecane 74.2 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 21 (H904184-23)**

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	12/18/2019	ND	1.89	94.6	2.00	7.44	
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	94.1	2.00	6.66	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.27	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.75	95.8	6.00	5.67	
Total BTX	<0.300	0.300	12/18/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 82.1 % 41-142

Surrogate: 1-Chlorooctadecane 88.3 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 22 (H904184-24)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35	
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23	QR-03
Total BTX	<0.300	0.300	12/18/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 73.1 % 41-142

Surrogate: 1-Chlorooctadecane 75.4 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 23A (H904184-25)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 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	80.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 76.9 % 41-142

Surrogate: 1-Chlorooctadecane 80.5 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 24 (H904184-26)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35	
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23	
Total BTEx	<0.300	0.300	12/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 80.4 % 41-142

Surrogate: 1-Chlorooctadecane 82.6 % 37.6-147

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Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 25 (H904184-27)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 83.2 % 41-142

Surrogate: 1-Chlorooctadecane 89.7 % 37.6-147

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Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 26 (H904184-28)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTEx	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 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	96.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 83.2 % 41-142

Surrogate: 1-Chlorooctadecane 87.6 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 27 (H904184-29)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 83.0 % 41-142

Surrogate: 1-Chlorooctadecane 85.8 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 28A (H904184-30)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTEx	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 82.0 % 41-142

Surrogate: 1-Chlorooctadecane 87.4 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: NW 29 (H904184-31)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 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	32.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 84.1 % 41-142

Surrogate: 1-Chlorooctadecane 85.8 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/10/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 14A (H904184-32)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 94.6 % 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	48.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 85.0 % 37.6-147

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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 15 (H904184-33)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTEX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 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	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 77.4 % 41-142

Surrogate: 1-Chlorooctadecane 79.6 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 16 (H904184-34)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 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	32.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 80.2 % 41-142

Surrogate: 1-Chlorooctadecane 83.3 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 17 (H904184-35)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	171	85.4	200	19.9	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	184	91.8	200	16.2	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 82.0 % 41-142

Surrogate: 1-Chlorooctadecane 87.1 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 18 (H904184-36)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.4 % 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	208	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 112 % 41-142

Surrogate: 1-Chlorooctadecane 119 % 37.6-147

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 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 19A (H904184-37)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTEX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.4 % 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	16.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 20 (H904184-38)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 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	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 115 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 21 (H904184-39)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35	
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23	
Total BTX	<0.300	0.300	12/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/11/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 22 (H904184-40)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTEX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.9 % 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	16.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 23 (H904184-41)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 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	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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**Analytical Results For:**

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 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 24 (H904184-42)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35	
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23	
Total BTX	<0.300	0.300	12/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.7 % 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	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 114 % 41-142

Surrogate: 1-Chlorooctadecane 119 % 37.6-147

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**Analytical Results For:**

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 LANCE CRENSHAW  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 25 (H904184-43)**

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	12/18/2019	ND	1.90	95.0	2.00	6.35		
Toluene*	<0.050	0.050	12/18/2019	ND	1.91	95.6	2.00	2.52		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.95	97.5	2.00	2.47		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.88	98.0	6.00	1.23		
Total BTX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 124 % 41-142

Surrogate: 1-Chlorooctadecane 130 % 37.6-147

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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 26A (H904184-44)**

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	12/18/2019	ND	1.93	96.7	2.00	6.24		
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	93.9	2.00	5.85		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.58		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.58	93.0	6.00	6.58		
Total BTEX	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 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	<16.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 117 % 37.6-147

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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 27 (H904184-45)**

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	12/18/2019	ND	1.93	96.7	2.00	6.24		
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	93.9	2.00	5.85		
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.58		
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.58	93.0	6.00	6.58		
Total BTEx	<0.300	0.300	12/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 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	96.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 117 % 41-142

Surrogate: 1-Chlorooctadecane 124 % 37.6-147

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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 28 (H904184-46)**

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	12/18/2019	ND	1.93	96.7	2.00	6.24	
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	93.9	2.00	5.85	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.58	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.58	93.0	6.00	6.58	
Total BTEx	<0.300	0.300	12/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	12/16/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 108 % 37.6-147

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**Analytical Results For:**

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

Received:	12/13/2019	Sampling Date:	12/12/2019
Reported:	12/19/2019	Sampling Type:	Soil
Project Name:	WRIGLEY TO PIPER	Sampling Condition:	Cool & Intact
Project Number:	11488 PIPELINE	Sample Received By:	Tamara Oldaker
Project Location:	GOODNIGHT MIDSTREAM - LEA CO NM		

**Sample ID: SW 29A (H904184-47)**

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	12/18/2019	ND	1.93	96.7	2.00	6.24	
Toluene*	<0.050	0.050	12/18/2019	ND	1.88	93.9	2.00	5.85	
Ethylbenzene*	<0.050	0.050	12/18/2019	ND	1.91	95.5	2.00	6.58	
Total Xylenes*	<0.150	0.150	12/18/2019	ND	5.58	93.0	6.00	6.58	
Total BTEX	<0.300	0.300	12/18/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	12/16/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/17/2019	ND	218	109	200	1.14	
DRO >C10-C28*	<10.0	10.0	12/17/2019	ND	216	108	200	1.00	
EXT DRO >C28-C36	<10.0	10.0	12/17/2019	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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### Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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

---

Celey D. Keene, Lab Director/Quality Manager

45 jo 05 ebaD

**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: Goodnight Midstream		P.O. #:		<b>BILL TO</b>										<b>ANALYSIS REQUEST</b>																											
Project Manager: Lance Crenshaw		Company: Etech																																							
Address:		Attn:																																							
City:		State:		Zip:																																					
Phone #:		Fax #:		Address:																																					
Project #: 11488		Project Owner:		City:																																					
Project Name: Wrigley to Piper Pipeline		State:		Zip:																																					
Project Location:		Phone #:																																							
Sampler Name: Lance Crenshaw		Fax #:																																							
FOR LAB USE ONLY		MATRIX		PRESERV		SAMPLING																																			
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME													
H904184																																									
1 FS62A				G 1		1																																			
2 FS63				G 1		1																																			
3 FS64				G 1		1																																			
4 FS65				G 1		1																																			
5 FS66				G 1		1																																			
6 FS67				G 1		1																																			
7 FS68				G 1		1																																			
8 FS69				G 1		1																																			
9 FS70A				G 1		1																																			
10 FS71				G 1		1																																			

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Relinquished By:		Date: 12/19/19		Received By:		Date: 12/19/19		Time: 15:24		Received By:		Time:		Delivered By: (Circle One) -0.9°C #97 Sample Condition		CHECKED BY: (Initials)		pm@etechenv.com	
Relinquished By:		Date:		Received By:		Date:		Time:		Received By:		Time:		Delivered By: (Circle One) -0.9°C #97 Sample Condition		CHECKED BY: (Initials)		pm@etechenv.com	
Sampler - UPS - Bus - Other:		Cool		Intact		Yes		No		Yes		No		Yes		No		Yes	

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Page 51 of 54



# ORDINAL 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: Goodnight Midstream						P.O. #:						ANALYSIS REQUEST											
Project Manager: Lance Crenshaw						Company: Etech																	
Address:						Attn:																	
City:						State:																	
Phone #:						Fax #:																	
Project #: 11488						Project Owner:																	
Project Name: Wrigley to Piper Pipeline						City:																	
Project Location:						State:																	
Sample Name: Lance Crenshaw						Zip:																	
FOR LAB USE ONLY						Fax #:																	
Lab I.D.						Sample I.D.																	
(G)RAB OR (C)OMP.						# CONTAINERS																	
GROUNDWATER						WASTEWATER																	
SOIL						OIL																	
SLUDGE						OTHER :																	
ACID/BASE:						ICE / COOL																	
OTHER :						DATE						TIME											
11 FS72						G 1						12/12/19						✓ ✓ ✓					
12 FS73						G 1						12/12/19						✓ ✓ ✓					
13 FS74B						G 1						12/12/19						✓ ✓ ✓					
14 FS75A						G 1						12/12/19						✓ ✓ ✓					
15 FS76						G 1						12/12/19						✓ ✓ ✓					
16 FS77A						G 1						12/12/19						✓ ✓ ✓					
17 NW15						G 1						12/11/19						✓ ✓ ✓					
18 NW16A						G 1						12/11/19						✓ ✓ ✓					
19 NW17						G 1						12/11/19						✓ ✓ ✓					
20 NW18						G 1						12/11/19						✓ ✓ ✓					
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: 12/13/19						Received By:						Phone Result: ☐ Yes ☑ No Add'l Phone #:					
Relinquished By:						Time: 15:25						Received By:						Fax Result: ☐ Yes ☑ No Add'l Fax #:					
Delivered By: (Circle One)						- O.G. #47						Sample Condition Cool Intact ☐ Yes ☑ No						CHECKED BY: (Initials) YEO					
Sampler - UPS - Bus - Other:						Corrected - O.S.												pm@etechnv.com					

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**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: Goodnight Midstream		P.O. #:		<b>BILL TO</b>										<b>ANALYSIS REQUEST</b>																											
Project Manager: Lance Crenshaw		Company: Etech																																							
Address:		Attn:																																							
City:		Address:																																							
State:		City:																																							
Zip:		State:																																							
Phone #:		Fax #:																																							
Project #: 11488		Project Owner:																																							
Project Name: Wrigley to Piper Pipeline		State:																																							
Project Location:		Phone #:																																							
Sample Name: Lance Crenshaw		Fax #:																																							
FOR LAB USE ONLY		PRESERV.		SAMPLING																																					
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME													
H904184																																									
21 NW19				G		1		✓																																	
22 NW20A				G		1		✓																																	
23 NW21				G		1		✓																																	
24 NW22				G		1		✓																																	
25 NW23A				G		1		✓																																	
26 NW24				G		1		✓																																	
27 NW25				G		1		✓																																	
28 NW26				G		1		✓																																	
29 NW27				G		1		✓																																	
30 NW28A				G		1		✓																																	

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Relinquished By:	Date: 12/1/19	Received By:	Date: 12/1/19	Phone Result:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date: 12/1/19	Received By:	Date: 12/1/19	Fax Result:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Add'l Fax #:
REMARKS:							
email results							
pm@etechnv.com							

Delivered By: (Circle One)	-0.92	#47	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Completed - 0.52		Cool <input type="checkbox"/> Intact <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

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# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Goodnight Midstream						<b>BILL TO</b>								ANALYSIS REQUEST															
Project Manager: Lance Crenshaw						P.O. #:																							
Address:						Company: Etech																							
City:						Attn:																							
Phone #:						Address:																							
Fax #:						City:																							
Project #: 11488						State:						Zip:																	
Project Name: Wrigley to Piper Pipeline						Phone #:																							
Project Location:						Fax #:																							
Sample Name: Lance Crenshaw						PRESERV						SAMPLING																	
FOR LAB USE ONLY						MATRIX																							
Lab I.D.						(G)RAB OR (C)OMP.						DATE						TIME											
						# CONTAINERS																							
Sample I.D.						GROUNDWATER						ACID/BASE:						ICE / COOL						OTHER :					
						WASTEWATER																							
H904184						SOIL						12/11/19						✓											
						OIL																							
31						SLUDGE						12/10/19						✓											
						OTHER :																							
NMV29						ACID/BASE:						12/11/19						✓											
						ICE / COOL																							
32						OTHER :						12/11/19						✓											
33						DATE						12/11/19						✓											
						TIME																							
SW14A						✓						12/11/19						✓											
34						✓						12/11/19						✓											
35						✓						12/11/19						✓											
36						✓						12/11/19						✓											
37						✓						12/11/19						✓											
38						✓						12/11/19						✓											
39						✓						12/11/19						✓											
40						✓						12/11/19						✓											
SW22						✓						12/11/19						✓											
SW21						✓						12/11/19						✓											
SW20						✓						12/11/19						✓											
SW19A						✓						12/11/19						✓											
SW18						✓						12/11/19						✓											
SW17						✓						12/11/19						✓											
SW16						✓						12/11/19						✓											
SW15						✓						12/11/19						✓											
SW14						✓						12/11/19						✓											
SW13						✓						12/11/19						✓											
SW12						✓						12/11/19						✓											
SW11						✓						12/11/19						✓											
SW10						✓						12/11/19						✓											
SW9						✓						12/11/19						✓											
SW8						✓						12/11/19						✓											
SW7						✓						12/11/19						✓											
SW6						✓						12/11/19						✓											
SW5						✓						12/11/19						✓											
SW4						✓						12/11/19						✓											
SW3						✓						12/11/19						✓											
SW2						✓						12/11/19						✓											
SW1						✓						12/11/19						✓											
SW0						✓						12/11/19						✓											
SW-1						✓						12/11/19						✓											
SW-2						✓						12/11/19						✓											
SW-3						✓						12/11/19						✓											
SW-4						✓						12/11/19						✓											
SW-5						✓						12/11/19						✓											
SW-6						✓						12/11/19						✓											
SW-7						✓						12/11/19						✓											
SW-8						✓						12/11/19						✓											
SW-9						✓						12/11/19						✓											
SW-10						✓						12/11/19						✓											
SW-11						✓						12/11/19						✓											
SW-12						✓						12/11/19						✓											
SW-13						✓						12/11/19						✓											

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**ARDINAL LABORATORIES**

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

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

Company Name: Goodnight Midstream		<b>BILL TO</b>		ANALYSIS REQUEST									
Project Manager: Lance Crenshaw		P.O. #:											
Address:		Company: Etech											
City:		Attn:											
State:		Address:											
Phone #:		City:											
Fax #:		State:											
Project #: 11488		Zip:											
Project Name: Wrigley to Piper Pipeline		Phone #:											
Project Location:		Fax #:											
Sampler Name: Lance Crenshaw													

FOR LAB USE ONLY				MATRIX						PRESERV		SAMPLING																							
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		Chlorides					
41		SW23		G		1		✓																		12/12/19				✓					
42		SW24		G		1		✓																		12/12/19				✓					
43		SW25		G		1		✓																		12/12/19				✓					
44		SW26A		G		1		✓																		12/12/19				✓					
45		SW27		G		1		✓																		12/12/19				✓					
46		SW28		G		1		✓																		12/12/19				✓					
47		SW29A		G		1		✓																		12/12/19				✓					

Relinquished By:		Date: 12/19/19		Received By:		Date: 12/19/19		Time: 15:25		Sample Condition		CHECKED BY:		Phone Result:		Fax Result:		Add'l Phone #:		Add'l Fax #:	
Relinquished By:		Date:		Received By:		Date:		Time:		Cool Intact		(Initials)		email results		pm@etechenv.com					
Delivered By: (Circle One) - 0.96		#47		Sample Condition		Cool Intact		CHECKED BY:		Phone Result:		Fax Result:		Add'l Phone #:		Add'l Fax #:					
Sampler - UPS - Bus - Other:		Submitted - 0.56		Cool Intact		Yes No		Yes No		Yes No		Yes No		Yes No		Yes No					

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# **Analytical Report 647357**

**for**

## **Etech Environmental & Safety Solution, Inc**

**Project Manager: Lance Crenshaw**

**Wrigley to Piper**

**02-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



02-JAN-20

Project Manager: **Lance Crenshaw**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **647357**  
**Wrigley to Piper**  
Project Address:

**Lance Crenshaw:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 647357. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 647357 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Holly Taylor'.

---

**Holly Taylor**  
Project Manager

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



## Sample Cross Reference 647357

Etech Environmental &amp; Safety Solution, Inc, Midland, TX

Wrigley to Piper

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS78A	S	12-16-19 00:00		647357-001
FS79	S	12-16-19 00:00		647357-002
FS80	S	12-17-19 00:00		647357-003
FS81	S	12-17-19 00:00		647357-004
FS82	S	12-17-19 00:00		647357-005
FS83	S	12-17-19 00:00		647357-006
FS84	S	12-17-19 00:00		647357-007
FS85	S	12-17-19 00:00		647357-008
FS86	S	12-18-19 00:00		647357-009
FS87	S	12-18-19 00:00		647357-010
FS88	S	12-18-19 00:00		647357-011
FS89B	S	12-18-19 00:00		647357-012
FS90	S	12-18-19 00:00		647357-013
FS91	S	12-18-19 00:00		647357-014
FS92	S	12-18-19 00:00		647357-015
NW30	S	12-16-19 00:00		647357-016
NW31A	S	12-17-19 00:00		647357-017
NW32	S	12-17-19 00:00		647357-018
NW33	S	12-17-19 00:00		647357-019
NW34	S	12-17-19 00:00		647357-020
NW35	S	12-18-19 00:00		647357-021
NW36	S	12-18-19 00:00		647357-022
NW37A	S	12-18-19 00:00		647357-023
NW38	S	12-18-19 00:00		647357-024
NW39	S	12-18-19 00:00		647357-025
NW30F	S	12-17-19 00:00		647357-026
SW31	S	12-17-19 00:00		647357-027
SW32	S	12-17-19 00:00		647357-028
SW33	S	12-17-19 00:00		647357-029
SW34	S	12-17-19 00:00		647357-030
FS 93A	S	12-19-19 00:00		647357-031
FS 94A	S	12-19-19 00:00		647357-032
FS95A	S	12-19-19 00:00		647357-033
FS 96	S	12-19-19 00:00		647357-034
FS 97	S	12-19-19 00:00		647357-035
NW 40A	S	12-19-19 00:00		647357-036
NW 41	S	12-19-19 00:00		647357-037
SW 40	S	12-19-19 00:00		647357-038
SW41A	S	12-19-19 00:00		647357-039
SW 42	S	12-19-19 00:00		647357-040
SW35	S	12-18-19 00:00		647357-041
SW36A	S	12-18-19 00:00		647357-042
SW37	S	12-18-19 00:00		647357-043



**Sample Cross Reference 647357****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley to Piper

SW38B	S	12-18-19 00:00	647357-044
SW39	S	12-18-19 00:00	647357-045
EWN1	S	12-17-19 00:00	647357-046
WWN1D	S	12-17-19 00:00	647357-047

**CASE NARRATIVE****Client Name: Etech Environmental & Safety Solution, Inc****Project Name: Wrigley to Piper**

Project ID:

Work Order Number(s): 647357

Report Date: 02-JAN-20

Date Received: 12/23/2019

---

**Sample receipt non conformances and comments:**

Lab Sample ID 647357-013 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647357-003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020, -021, -022.

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

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3111563 Chloride by EPA 300

Lab Sample ID 647361-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference.

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

Batch: LBA-3111570 Chloride by EPA 300

Lab Sample ID 647357-013 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647357-003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020, -021, -022.

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

Lab Sample ID 647357-013 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647357-003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020, -021, -022.

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

**CASE NARRATIVE****Client Name: Etech Environmental & Safety Solution, Inc****Project Name: Wrigley to Piper**

Project ID:

Work Order Number(s): 647357

Report Date: 02-JAN-20

Date Received: 12/23/2019

---

Batch: LBA-3111703 Chloride by EPA 300

Lab Sample ID 647357-047 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647357-043, -044, -045, -046, -047.

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

Batch: LBA-3111947 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3112076 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3112080 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3112181 BTEX by EPA 8021B

Lab Sample ID 647357-031 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647357-031, -032, -033, -034, -035, -036, -037, -038, -039, -040.

The Laboratory Control Sample for Toluene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS78A** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-001 Date Collected: 12.16.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111563 Date Prep: 12.23.19 12.30

Prep seq: 7693114

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	120	5.02	0.862	mg/kg	12.23.19 19:05		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 14:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 14:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 14:09	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 14:09	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	91	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3111947 Date Prep: 12.29.19 12.00

Prep seq: 7693451

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	12.29.19 19:18	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	12.29.19 19:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	12.29.19 19:18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	12.29.19 19:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.29.19 19:18	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.29.19 19:18	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.29.19 19:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	113	70 - 130	%		
4-Bromofluorobenzene	96	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS79** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-002 Date Collected: 12.16.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111563 Date Prep: 12.23.19 12.30

Prep seq: 7693114

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2600	24.8	4.26	mg/kg	12.23.19 19:12		5

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 15:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 15:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 15:13	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 15:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3111947 Date Prep: 12.29.19 12.00

Prep seq: 7693451

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.29.19 19:38	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.29.19 19:38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.29.19 19:38	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.29.19 19:38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.29.19 19:38	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.29.19 19:38	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.29.19 19:38	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	112	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS80** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-003 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	573	5.02	0.862	mg/kg	12.23.19 19:51		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 15:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 15:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 15:34	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 15:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	12.30.19 13:40	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	12.30.19 13:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	12.30.19 13:40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	12.30.19 13:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.30.19 13:40	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.30.19 13:40	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.30.19 13:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	70 - 130	%		
4-Bromofluorobenzene	86	70 - 130	%		





# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS81** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-004 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1130	4.98	0.855	mg/kg	12.23.19 20:10		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 15:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 15:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 15:55	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 15:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.30.19 14:00	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.30.19 14:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.30.19 14:00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.30.19 14:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.30.19 14:00	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.30.19 14:00	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.30.19 14:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	70 - 130	%		
4-Bromofluorobenzene	86	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS82** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-005 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	245	5.00	0.858	mg/kg	12.23.19 20:17		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 16:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 16:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 16:16	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 16:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	12.30.19 14:20	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	12.30.19 14:20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	12.30.19 14:20	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	12.30.19 14:20	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	12.30.19 14:20	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	12.30.19 14:20	U	
Total BTEX		<0.00201		0.000346	mg/kg	12.30.19 14:20	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	90	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS83** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-006 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	605	5.03	0.864	mg/kg	12.23.19 20:24		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	12.23.19 16:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	12.23.19 16:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	12.23.19 16:37	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	12.23.19 16:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	12.30.19 14:40	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	12.30.19 14:40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	12.30.19 14:40	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	12.30.19 14:40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	12.30.19 14:40	U	1
Total Xylenes	1330-20-7	<0.00202		0.000347	mg/kg	12.30.19 14:40	U	
Total BTEX		<0.00202		0.000347	mg/kg	12.30.19 14:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	88	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS84** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-007 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	490	4.95	0.850	mg/kg	12.23.19 20:30		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 16:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 16:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 16:58	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 16:58	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	12.30.19 15:01	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	12.30.19 15:01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	12.30.19 15:01	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	12.30.19 15:01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.30.19 15:01	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.30.19 15:01	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.30.19 15:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	89	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS85** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-008 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	525	4.95	0.850	mg/kg	12.23.19 20:50		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 17:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 17:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 17:19	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 17:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.30.19 15:21	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	12.30.19 15:21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	12.30.19 15:21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.30.19 15:21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	12.30.19 15:21	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	12.30.19 15:21	U	
Total BTEX		<0.00199		0.000343	mg/kg	12.30.19 15:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	110	70 - 130	%		
4-Bromofluorobenzene	87	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS86** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-009 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	90.2	4.99	0.857	mg/kg	12.23.19 20:56		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 17:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 17:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 17:39	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 17:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	12.30.19 15:41	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	12.30.19 15:41	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	12.30.19 15:41	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	12.30.19 15:41	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	12.30.19 15:41	U	1
Total Xylenes	1330-20-7	<0.00202		0.000347	mg/kg	12.30.19 15:41	U	
Total BTEX		<0.00202		0.000347	mg/kg	12.30.19 15:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	89	70 - 130	%		





# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS87** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-010 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	97.5	5.00	0.858	mg/kg	12.23.19 21:03		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	12.23.19 18:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	12.23.19 18:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	12.23.19 18:00	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	12.23.19 18:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000381	mg/kg	12.30.19 16:01	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000451	mg/kg	12.30.19 16:01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000559	mg/kg	12.30.19 16:01	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	0.00100	mg/kg	12.30.19 16:01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000341	mg/kg	12.30.19 16:01	U	1
Total Xylenes	1330-20-7	<0.00198		0.000341	mg/kg	12.30.19 16:01	U	
Total BTEX		<0.00198		0.000341	mg/kg	12.30.19 16:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	90	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS88** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-011 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	52.1	5.03	0.864	mg/kg	12.23.19 21:09		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 18:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 18:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 18:42	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 18:42	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	106	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.30.19 16:21	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	12.30.19 16:21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	12.30.19 16:21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.30.19 16:21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	12.30.19 16:21	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	12.30.19 16:21	U	
Total BTEX		<0.00199		0.000343	mg/kg	12.30.19 16:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	70 - 130	%		
4-Bromofluorobenzene	87	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS89B**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-012

Date Collected: 12.18.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111570

Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	9.54	5.01	0.860	mg/kg	12.23.19 21:16		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111577

Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 19:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 19:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 19:03	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 19:03	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112076

Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000386	mg/kg	12.30.19 17:40	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000457	mg/kg	12.30.19 17:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000566	mg/kg	12.30.19 17:40	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	0.00102	mg/kg	12.30.19 17:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000345	mg/kg	12.30.19 17:40	U	1
Total Xylenes	1330-20-7	<0.00200		0.000345	mg/kg	12.30.19 17:40	U	
Total BTEX		<0.00200		0.000345	mg/kg	12.30.19 17:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	84	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS90** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-013 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	204	4.96	0.852	mg/kg	12.23.19 21:22		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 19:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 19:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 19:24	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 19:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	99	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000389	mg/kg	12.30.19 18:00	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000460	mg/kg	12.30.19 18:00	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000570	mg/kg	12.30.19 18:00	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	0.00102	mg/kg	12.30.19 18:00	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000348	mg/kg	12.30.19 18:00	U	1
Total Xylenes	1330-20-7	<0.00202		0.000348	mg/kg	12.30.19 18:00	U	
Total BTEX		<0.00202		0.000348	mg/kg	12.30.19 18:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	110	70 - 130	%		
4-Bromofluorobenzene	90	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS91** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-014 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	80.3	5.00	0.858	mg/kg	12.23.19 21:42		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 19:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 19:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 19:45	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 19:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	104	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000387	mg/kg	12.30.19 18:20	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000458	mg/kg	12.30.19 18:20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000568	mg/kg	12.30.19 18:20	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	12.30.19 18:20	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	12.30.19 18:20	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	12.30.19 18:20	U	
Total BTEX		<0.00201		0.000346	mg/kg	12.30.19 18:20	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	89	70 - 130	%		



# Certificate of Analytical Results

## 647357

### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS92** Matrix: Soil Sample Depth:  
 Lab Sample Id: 647357-015 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Analyst: CHE % Moist: Tech: CHE  
 Seq Number: 3111570 Date Prep: 12.23.19 14.40  
 Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	22.1	5.04	0.865	mg/kg	12.23.19 21:49		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015  
 Analyst: ARM % Moist: Tech: DVM  
 Seq Number: 3111577 Date Prep: 12.23.19 12.00  
 Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 20:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 20:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 20:07	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 20:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B  
 Analyst: KTL % Moist: Tech: KTL  
 Seq Number: 3112076 Date Prep: 12.29.19 13.00  
 Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000387	mg/kg	12.30.19 18:40	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000458	mg/kg	12.30.19 18:40	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000568	mg/kg	12.30.19 18:40	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	12.30.19 18:40	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	12.30.19 18:40	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	12.30.19 18:40	U	
Total BTEX		<0.00201		0.000346	mg/kg	12.30.19 18:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	92	70 - 130	%		





# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **NW30** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-016 Date Collected: 12.16.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	125	4.97	0.853	mg/kg	12.23.19 22:08		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 20:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 20:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 20:28	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 20:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3111947 Date Prep: 12.29.19 12.00

Prep seq: 7693451

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	12.29.19 19:59	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	12.29.19 19:59	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	12.29.19 19:59	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	12.29.19 19:59	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	12.29.19 19:59	U	1
Total Xylenes	1330-20-7	<0.00202		0.000347	mg/kg	12.29.19 19:59	U	
Total BTEX		<0.00202		0.000347	mg/kg	12.29.19 19:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	113	70 - 130	%		
4-Bromofluorobenzene	98	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: NW31A

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-017

Date Collected: 12.17.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111570

Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	7.39	4.95	0.850	mg/kg	12.23.19 22:15		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111577

Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 20:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 20:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 20:49	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 20:49	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112076

Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.30.19 19:01	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.30.19 19:01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.30.19 19:01	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.30.19 19:01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.30.19 19:01	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.30.19 19:01	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.30.19 19:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	110	70 - 130	%		
4-Bromofluorobenzene	87	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **NW32** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-018 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	15.7	5.03	0.864	mg/kg	12.23.19 22:21		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111577 Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 21:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 21:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 21:10	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 21:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	12.30.19 19:21	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	12.30.19 19:21	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	12.30.19 19:21	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	12.30.19 19:21	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	12.30.19 19:21	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	12.30.19 19:21	U	
Total BTEX		<0.00201		0.000346	mg/kg	12.30.19 19:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	110	70 - 130	%		
4-Bromofluorobenzene	91	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: NW33

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-019

Date Collected: 12.17.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111570

Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	20.1	5.00	0.858	mg/kg	12.23.19 22:28		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111577

Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 21:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 21:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 21:31	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 21:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112076

Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.30.19 19:41	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	12.30.19 19:41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	12.30.19 19:41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.30.19 19:41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	12.30.19 19:41	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	12.30.19 19:41	U	
Total BTEX		<0.00199		0.000343	mg/kg	12.30.19 19:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	89	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: NW34

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-020

Date Collected: 12.17.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111570

Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	22.0	5.00	0.858	mg/kg	12.23.19 22:34		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111577

Date Prep: 12.23.19 12.00

Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 21:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 21:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 21:53	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 21:53	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112076

Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.30.19 20:01	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.30.19 20:01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.30.19 20:01	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.30.19 20:01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.30.19 20:01	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.30.19 20:01	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.30.19 20:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	70 - 130	%		
4-Bromofluorobenzene	87	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **NW35** Matrix: **Soil** Sample Depth:

Lab Sample Id: 647357-021 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: **CHE** % Moist: Tech: **CHE**

Seq Number: 3111570 Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	67.6	5.00	0.858	mg/kg	12.23.19 22:41		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: **ARM** % Moist: Tech: **DVM**

Seq Number: 3111580 Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 14:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 14:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 14:09	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 14:09	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: **KTL** % Moist: Tech: **KTL**

Seq Number: 3112076 Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	12.30.19 20:21	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	12.30.19 20:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	12.30.19 20:21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	12.30.19 20:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.30.19 20:21	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.30.19 20:21	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.30.19 20:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	89	70 - 130	%		





# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: NW36

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-022

Date Collected: 12.18.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111570

Date Prep: 12.23.19 14.40

Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	77.6	5.02	0.862	mg/kg	12.23.19 22:47		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 15:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 15:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 15:13	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 15:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112076

Date Prep: 12.29.19 13.00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.30.19 20:41	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000453	mg/kg	12.30.19 20:41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000561	mg/kg	12.30.19 20:41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.30.19 20:41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000342	mg/kg	12.30.19 20:41	U	1
Total Xylenes	1330-20-7	<0.00199		0.000342	mg/kg	12.30.19 20:41	U	
Total BTEX		<0.00199		0.000342	mg/kg	12.30.19 20:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	70 - 130	%		
4-Bromofluorobenzene	86	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **NW37A** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-023 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111571 Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	84.4	4.95	0.850	mg/kg	12.23.19 23:27		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111580 Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 15:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 15:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 15:34	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 15:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112080 Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	12.31.19 01:33	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	12.31.19 01:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	12.31.19 01:33	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	12.31.19 01:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.31.19 01:33	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.31.19 01:33	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.31.19 01:33	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	98	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **NW38** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-024 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111571 Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	55.2	5.01	0.860	mg/kg	12.23.19 23:46		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111580 Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 15:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 15:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 15:55	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 15:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112080 Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.31.19 01:54	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.31.19 01:54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.31.19 01:54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.31.19 01:54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.31.19 01:54	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.31.19 01:54	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.31.19 01:54	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	114	70 - 130	%		
4-Bromofluorobenzene	96	70 - 130	%		



# Certificate of Analytical Results

## 647357

### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **NW39** Matrix: Soil Sample Depth:  
 Lab Sample Id: 647357-025 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Analyst: CHE % Moist: Tech: CHE  
 Seq Number: 3111571 Date Prep: 12.23.19 14.50  
 Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	5.34	4.97	0.853	mg/kg	12.23.19 23:53		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015  
 Analyst: ARM % Moist: Tech: DVM  
 Seq Number: 3111580 Date Prep: 12.23.19 12.00  
 Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 16:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 16:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 16:16	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 16:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B  
 Analyst: KTL % Moist: Tech: KTL  
 Seq Number: 3112080 Date Prep: 12.30.19 13.00  
 Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000387	mg/kg	12.31.19 02:14	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000458	mg/kg	12.31.19 02:14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000568	mg/kg	12.31.19 02:14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	12.31.19 02:14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	12.31.19 02:14	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	12.31.19 02:14	U	
Total BTEX		<0.00201		0.000346	mg/kg	12.31.19 02:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	95	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **NW30F**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-026

Date Collected: 12.17.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	7.43	5.00	0.858	mg/kg	12.23.19 23:59		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 16:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 16:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 16:37	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 16:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112080

Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	12.31.19 02:35	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	12.31.19 02:35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	12.31.19 02:35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	12.31.19 02:35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	12.31.19 02:35	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	12.31.19 02:35	U	
Total BTEX		<0.00201		0.000346	mg/kg	12.31.19 02:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	118	70 - 130	%		
4-Bromofluorobenzene	101	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW31**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-027

Date Collected: 12.17.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.02	5.02	0.862	mg/kg	12.24.19 00:06	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 16:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 16:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 16:58	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 16:58	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	91	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112080

Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.31.19 02:55	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000453	mg/kg	12.31.19 02:55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000561	mg/kg	12.31.19 02:55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.31.19 02:55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000342	mg/kg	12.31.19 02:55	U	1
Total Xylenes	1330-20-7	<0.00199		0.000342	mg/kg	12.31.19 02:55	U	
Total BTEX		<0.00199		0.000342	mg/kg	12.31.19 02:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	98	70 - 130	%		





# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW32**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-028

Date Collected: 12.17.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	85.1	5.00	0.858	mg/kg	12.24.19 00:26		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 17:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 17:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 17:19	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 17:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	91	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112080

Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000382	mg/kg	12.31.19 03:16	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000452	mg/kg	12.31.19 03:16	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000560	mg/kg	12.31.19 03:16	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	0.00101	mg/kg	12.31.19 03:16	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000342	mg/kg	12.31.19 03:16	U	1
Total Xylenes	1330-20-7	<0.00198		0.000342	mg/kg	12.31.19 03:16	U	
Total BTEX		<0.00198		0.000342	mg/kg	12.31.19 03:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	117	70 - 130	%		
4-Bromofluorobenzene	102	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW33** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-029 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111571 Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	27.6	5.00	0.858	mg/kg	12.24.19 00:32		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111580 Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 17:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 17:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 17:39	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 17:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112080 Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.31.19 03:36	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000453	mg/kg	12.31.19 03:36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000561	mg/kg	12.31.19 03:36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.31.19 03:36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000342	mg/kg	12.31.19 03:36	U	1
Total Xylenes	1330-20-7	<0.00199		0.000342	mg/kg	12.31.19 03:36	U	
Total BTEX		<0.00199		0.000342	mg/kg	12.31.19 03:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	97	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW34**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-030

Date Collected: 12.17.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	151	5.00	0.858	mg/kg	12.24.19 00:39		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 18:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 18:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 18:00	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 18:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112080

Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000381	mg/kg	12.31.19 03:57	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000451	mg/kg	12.31.19 03:57	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000559	mg/kg	12.31.19 03:57	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	0.00100	mg/kg	12.31.19 03:57	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000341	mg/kg	12.31.19 03:57	U	1
Total Xylenes	1330-20-7	<0.00198		0.000341	mg/kg	12.31.19 03:57	U	
Total BTEX		<0.00198		0.000341	mg/kg	12.31.19 03:57	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	96	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS 93A**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-031

Date Collected: 12.19.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	16.0	5.00	0.858	mg/kg	12.24.19 00:45		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	12.23.19 18:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	12.23.19 18:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	12.23.19 18:42	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	12.23.19 18:42	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112181

Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	01.02.20 01:09	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	01.02.20 01:09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	01.02.20 01:09	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	01.02.20 01:09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.02.20 01:09	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.02.20 01:09	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.02.20 01:09	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	112	70 - 130	%		
4-Bromofluorobenzene	89	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS 94A**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-032

Date Collected: 12.19.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	118	4.96	0.852	mg/kg	12.24.19 00:52		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 19:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 19:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 19:03	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 19:03	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112181

Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.02.20 01:29	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000453	mg/kg	01.02.20 01:29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000561	mg/kg	01.02.20 01:29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.02.20 01:29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000342	mg/kg	01.02.20 01:29	U	1
Total Xylenes	1330-20-7	<0.00199		0.000342	mg/kg	01.02.20 01:29	U	
Total BTEX		<0.00199		0.000342	mg/kg	01.02.20 01:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	114	70 - 130	%		
4-Bromofluorobenzene	96	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS95A** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-033 Date Collected: 12.19.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111571 Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	63.4	5.04	0.865	mg/kg	12.24.19 00:58		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111580 Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 19:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 19:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 19:24	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 19:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112181 Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	01.02.20 01:50	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	01.02.20 01:50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	01.02.20 01:50	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	01.02.20 01:50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.02.20 01:50	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.02.20 01:50	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.02.20 01:50	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	97	70 - 130	%		





# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS 96** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-034 Date Collected: 12.19.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111571 Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	906	5.01	0.860	mg/kg	12.24.19 01:18		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111580 Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 19:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 19:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 19:45	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 19:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112181 Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	01.02.20 02:10	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	01.02.20 02:10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	01.02.20 02:10	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	01.02.20 02:10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	01.02.20 02:10	U	1
Total Xylenes	1330-20-7	<0.00202		0.000347	mg/kg	01.02.20 02:10	U	
Total BTEX		<0.00202		0.000347	mg/kg	01.02.20 02:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	99	70 - 130	%		



# Certificate of Analytical Results

## 647357

### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **FS 97** Matrix: Soil Sample Depth:  
 Lab Sample Id: 647357-035 Date Collected: 12.19.19 00.00 Date Received: 12.23.19 11.30  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Analyst: CHE % Moist: Tech: CHE  
 Seq Number: 3111571 Date Prep: 12.23.19 14.50  
 Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	112	4.98	0.855	mg/kg	12.24.19 01:25		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015  
 Analyst: ARM % Moist: Tech: DVM  
 Seq Number: 3111580 Date Prep: 12.23.19 12.00  
 Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 20:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 20:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 20:07	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 20:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	91	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B  
 Analyst: KTL % Moist: Tech: KTL  
 Seq Number: 3112181 Date Prep: 12.30.19 13.30  
 Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000382	mg/kg	01.02.20 02:30	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000452	mg/kg	01.02.20 02:30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000560	mg/kg	01.02.20 02:30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	0.00101	mg/kg	01.02.20 02:30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000342	mg/kg	01.02.20 02:30	U	1
Total Xylenes	1330-20-7	<0.00198		0.000342	mg/kg	01.02.20 02:30	U	
Total BTEX		<0.00198		0.000342	mg/kg	01.02.20 02:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: NW 40A Matrix: Soil Sample Depth:

Lab Sample Id: 647357-036 Date Collected: 12.19.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111571 Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	23.3	5.05	0.867	mg/kg	12.24.19 01:44		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111580 Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 20:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 20:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 20:28	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 20:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112181 Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	01.02.20 02:51	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	01.02.20 02:51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	01.02.20 02:51	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	01.02.20 02:51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.02.20 02:51	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.02.20 02:51	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.02.20 02:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	98	70 - 130	%		



# Certificate of Analytical Results

## 647357

### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: NW 41

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-037

Date Collected: 12.19.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	75.9	5.00	0.858	mg/kg	12.24.19 01:51		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 20:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 20:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 20:49	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 20:49	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112181

Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	01.02.20 03:11	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	01.02.20 03:11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	01.02.20 03:11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	01.02.20 03:11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	01.02.20 03:11	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	01.02.20 03:11	U	
Total BTEX		<0.00201		0.000346	mg/kg	01.02.20 03:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	117	70 - 130	%		
4-Bromofluorobenzene	98	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: SW 40

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-038

Date Collected: 12.19.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	247	5.05	0.867	mg/kg	12.24.19 01:57		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 21:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 21:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 21:10	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.23.19 21:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112181

Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000387	mg/kg	01.02.20 03:32	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000458	mg/kg	01.02.20 03:32	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000568	mg/kg	01.02.20 03:32	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	01.02.20 03:32	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	01.02.20 03:32	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	01.02.20 03:32	U	
Total BTEX		<0.00201		0.000346	mg/kg	01.02.20 03:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	118	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		



# Certificate of Analytical Results

## 647357

### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW41A** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-039 Date Collected: 12.19.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111571 Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	243	5.05	0.867	mg/kg	12.24.19 02:04		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111580 Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 21:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 21:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 21:31	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 21:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112181 Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000387	mg/kg	01.02.20 03:52	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000458	mg/kg	01.02.20 03:52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000568	mg/kg	01.02.20 03:52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	01.02.20 03:52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	01.02.20 03:52	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	01.02.20 03:52	U	
Total BTEX		<0.00201		0.000346	mg/kg	01.02.20 03:52	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	96	70 - 130	%		





# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: SW 42

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-040

Date Collected: 12.19.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	37.9	4.98	0.855	mg/kg	12.24.19 02:10		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111580

Date Prep: 12.23.19 12.00

Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.23.19 21:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.23.19 21:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.23.19 21:53	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.23.19 21:53	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112181

Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.02.20 04:13	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000453	mg/kg	01.02.20 04:13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000561	mg/kg	01.02.20 04:13	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.02.20 04:13	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000342	mg/kg	01.02.20 04:13	U	1
Total Xylenes	1330-20-7	<0.00199		0.000342	mg/kg	01.02.20 04:13	U	
Total BTEX		<0.00199		0.000342	mg/kg	01.02.20 04:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	94	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW35** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-041 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3111571 Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	248	5.00	0.858	mg/kg	12.24.19 02:17		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111702 Date Prep: 12.24.19 09.00

Prep seq: 7693195

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.24.19 12:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.24.19 12:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.24.19 12:55	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.24.19 12:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112080 Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	12.31.19 04:17	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	12.31.19 04:17	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	12.31.19 04:17	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	12.31.19 04:17	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	12.31.19 04:17	U	1
Total Xylenes	1330-20-7	<0.00202		0.000347	mg/kg	12.31.19 04:17	U	
Total BTEX		<0.00202		0.000347	mg/kg	12.31.19 04:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	95	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW36A**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-042

Date Collected: 12.18.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3111571

Date Prep: 12.23.19 14.50

Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	63.0	5.03	0.864	mg/kg	12.24.19 02:23		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111702

Date Prep: 12.24.19 09.00

Prep seq: 7693195

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.24.19 13:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.24.19 13:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.24.19 13:58	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.24.19 13:58	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112080

Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.31.19 04:37	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	12.31.19 04:37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	12.31.19 04:37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.31.19 04:37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	12.31.19 04:37	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	12.31.19 04:37	U	
Total BTEX		<0.00199		0.000343	mg/kg	12.31.19 04:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	117	70 - 130	%		
4-Bromofluorobenzene	99	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW37** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-043 Date Collected: 12.18.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: SPC % Moist: Tech: SPC

Seq Number: 3111703 Date Prep: 12.24.19 13.00

Prep seq: 7693234

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	9.15	4.99	0.857	mg/kg	12.24.19 14:08		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111702 Date Prep: 12.24.19 09.00

Prep seq: 7693195

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	12.24.19 14:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	12.24.19 14:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	12.24.19 14:19	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	12.24.19 14:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112080 Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000389	mg/kg	12.31.19 06:18	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000460	mg/kg	12.31.19 06:18	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000570	mg/kg	12.31.19 06:18	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	0.00102	mg/kg	12.31.19 06:18	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000348	mg/kg	12.31.19 06:18	U	1
Total Xylenes	1330-20-7	<0.00202		0.000348	mg/kg	12.31.19 06:18	U	
Total BTEX		<0.00202		0.000348	mg/kg	12.31.19 06:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	89	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW38B**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-044

Date Collected: 12.18.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: SPC

% Moist:

Tech: SPC

Seq Number: 3111703

Date Prep: 12.24.19 13.00

Prep seq: 7693234

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	15.1	5.02	0.862	mg/kg	12.24.19 14:28		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111702

Date Prep: 12.24.19 09.00

Prep seq: 7693195

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.24.19 14:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.24.19 14:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.24.19 14:40	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	12.24.19 14:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112080

Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	12.31.19 06:38	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	12.31.19 06:38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	12.31.19 06:38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	12.31.19 06:38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	12.31.19 06:38	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	12.31.19 06:38	U	
Total BTEX		<0.00199		0.000343	mg/kg	12.31.19 06:38	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	113	70 - 130	%		
4-Bromofluorobenzene	89	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **SW39**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647357-045

Date Collected: 12.18.19 00.00

Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: SPC

% Moist:

Tech: SPC

Seq Number: 3111703

Date Prep: 12.24.19 13.00

Prep seq: 7693234

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	9.94	5.05	0.867	mg/kg	12.24.19 14:34		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3111702

Date Prep: 12.24.19 09.00

Prep seq: 7693195

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.24.19 15:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.24.19 15:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.24.19 15:02	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.24.19 15:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	91	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112080

Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.31.19 06:59	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.31.19 06:59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.31.19 06:59	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.31.19 06:59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.31.19 06:59	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.31.19 06:59	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.31.19 06:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	99	70 - 130	%		





# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: EWN1 Matrix: Soil Sample Depth:

Lab Sample Id: 647357-046 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: SPC % Moist: Tech: SPC

Seq Number: 3111703 Date Prep: 12.24.19 13.00

Prep seq: 7693234

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	8.93	4.96	0.852	mg/kg	12.24.19 14:41		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111702 Date Prep: 12.24.19 09.00

Prep seq: 7693195

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	12.24.19 15:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	12.24.19 15:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	12.24.19 15:23	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	12.24.19 15:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112080 Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	12.31.19 07:19	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	12.31.19 07:19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	12.31.19 07:19	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	12.31.19 07:19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.31.19 07:19	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.31.19 07:19	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.31.19 07:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	114	70 - 130	%		
4-Bromofluorobenzene	99	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **WWN1D** Matrix: Soil Sample Depth:

Lab Sample Id: 647357-047 Date Collected: 12.17.19 00.00 Date Received: 12.23.19 11.30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: SPC % Moist: Tech: SPC

Seq Number: 3111703 Date Prep: 12.24.19 13.00

Prep seq: 7693234

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	31.6	5.04	0.865	mg/kg	12.24.19 15:40		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: ARM % Moist: Tech: DVM

Seq Number: 3111702 Date Prep: 12.24.19 09.00

Prep seq: 7693195

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	12.24.19 15:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	12.24.19 15:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	12.24.19 15:44	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	12.24.19 15:44	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112080 Date Prep: 12.30.19 13.00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.31.19 07:40	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.31.19 07:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.31.19 07:40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.31.19 07:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.31.19 07:40	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	12.31.19 07:40	U	
Total BTEX		<0.00200		0.000344	mg/kg	12.31.19 07:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	98	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **7693114-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693114-1-BLK Date Collected: Date Received:  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Analyst: CHE % Moist: Tech: CHE  
 Seq Number: 3111563 Date Prep: 12.23.19 12.30  
 Prep seq: 7693114

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	12.23.19 15:55	U	1

Sample Id: **7693136-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693136-1-BLK Date Collected: Date Received:  
 Analytical Method: TPH By SW8015 Mod Prep Method: 8015  
 Analyst: ARM % Moist: Tech: DVM  
 Seq Number: 3111577 Date Prep: 12.23.19 12.00  
 Prep seq: 7693136

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 13:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 13:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 13:06	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	97	70 - 135	%		

Sample Id: **7693138-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693138-1-BLK Date Collected: Date Received:  
 Analytical Method: TPH By SW8015 Mod Prep Method: 8015  
 Analyst: ARM % Moist: Tech: DVM  
 Seq Number: 3111580 Date Prep: 12.23.19 12.00  
 Prep seq: 7693138

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.23.19 13:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.23.19 13:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.23.19 13:06	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	91	70 - 135	%		



# Certificate of Analytical Results

## 647357

### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **7693141-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693141-1-BLK Date Collected: Date Received:  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Analyst: CHE % Moist: Tech: CHE  
 Seq Number: 3111570 Date Prep: 12.23.19 14.40  
 Prep seq: 7693141

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	12.23.19 19:31	U	1

Sample Id: **7693142-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693142-1-BLK Date Collected: Date Received:  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Analyst: CHE % Moist: Tech: CHE  
 Seq Number: 3111571 Date Prep: 12.23.19 14.50  
 Prep seq: 7693142

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	12.23.19 23:07	U	1

Sample Id: **7693195-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693195-1-BLK Date Collected: Date Received:  
 Analytical Method: TPH By SW8015 Mod Prep Method: 8015  
 Analyst: ARM % Moist: Tech: DVM  
 Seq Number: 3111702 Date Prep: 12.24.19 09.00  
 Prep seq: 7693195

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	12.24.19 11:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	12.24.19 11:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	12.24.19 11:52	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	95	70 - 135	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **7693234-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693234-1-BLK Date Collected: Date Received:  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Analyst: SPC % Moist: Tech: SPC  
 Seq Number: 3111703 Date Prep: 12.24.19 13.00  
 Prep seq: 7693234

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	12.24.19 13:48	U	1

Sample Id: **7693451-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693451-1-BLK Date Collected: Date Received:  
 Analytical Method: BTEX by EPA 8021B Prep Method: 5030B  
 Analyst: KTL % Moist: Tech: KTL  
 Seq Number: 3111947 Date Prep: 12.29.19 12.00  
 Prep seq: 7693451

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.29.19 18:37	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.29.19 18:37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.29.19 18:37	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.29.19 18:37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.29.19 18:37	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	91	70 - 130	%		



# Certificate of Analytical Results

## 647357



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper

Sample Id: **7693461-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7693461-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112076 Date Prep: 12.29.19 13:00

Prep seq: 7693461

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.30.19 13:00	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.30.19 13:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.30.19 13:00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.30.19 13:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.30.19 13:00	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	80	70 - 130	%		

Sample Id: **7693494-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7693494-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: KTL % Moist: Tech: KTL

Seq Number: 3112080 Date Prep: 12.30.19 13:00

Prep seq: 7693494

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	12.31.19 01:13	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	12.31.19 01:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	12.31.19 01:13	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	12.31.19 01:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	12.31.19 01:13	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	113	70 - 130	%		
4-Bromofluorobenzene	92	70 - 130	%		





# Certificate of Analytical Results

## 647357



**Etech Environmental & Safety Solution, Inc, Midland, TX**  
Wrigley to Piper

Sample Id: **7693497-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7693497-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112181

Date Prep: 12.30.19 13.30

Prep seq: 7693497

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	01.02.20 00:48	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	01.02.20 00:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	01.02.20 00:48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	01.02.20 00:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.02.20 00:48	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	112	70 - 130	%		
4-Bromofluorobenzene	90	70 - 130	%		



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



# Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper

Work Orders : 647357,

Project ID:

Lab Batch #: 3111947

Sample: 7693451-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/29/19 16:27

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	70-130	
4-Bromofluorobenzene	0.0278	0.0300	93	70-130	

Lab Batch #: 3111947

Sample: 7693451-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/29/19 16:48

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	70-130	
4-Bromofluorobenzene	0.0299	0.0300	100	70-130	

Lab Batch #: 3111947

Sample: 647357-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/29/19 17:08

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0311	0.0300	104	70-130	

Lab Batch #: 3111947

Sample: 647357-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/29/19 17:28

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	70-130	
4-Bromofluorobenzene	0.0308	0.0300	103	70-130	

Lab Batch #: 3111947

Sample: 7693451-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/29/19 18:37

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0272	0.0300	91	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



# Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper

Work Orders : 647357,

Project ID:

Lab Batch #: 3112076

Sample: 7693461-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/30/19 11:01

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	70-130	
4-Bromofluorobenzene	0.0280	0.0300	93	70-130	

Lab Batch #: 3112076

Sample: 7693461-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/30/19 11:21

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3112076

Sample: 647242-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/30/19 11:41

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0290	0.0300	97	70-130	

Lab Batch #: 3112076

Sample: 647242-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/30/19 12:01

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	70-130	
4-Bromofluorobenzene	0.0284	0.0300	95	70-130	

Lab Batch #: 3112076

Sample: 7693461-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/30/19 13:00

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	70-130	
4-Bromofluorobenzene	0.0239	0.0300	80	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



# Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper

Work Orders : 647357,

Project ID:

Lab Batch #: 3112080

Sample: 7693494-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/30/19 23:03

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	70-130	
4-Bromofluorobenzene	0.0287	0.0300	96	70-130	

Lab Batch #: 3112080

Sample: 7693494-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/30/19 23:23

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0289	0.0300	96	70-130	

Lab Batch #: 3112080

Sample: 647357-028 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/30/19 23:44

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0341	0.0300	114	70-130	
4-Bromofluorobenzene	0.0314	0.0300	105	70-130	

Lab Batch #: 3112080

Sample: 647357-028 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/31/19 00:04

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0347	0.0300	116	70-130	
4-Bromofluorobenzene	0.0337	0.0300	112	70-130	

Lab Batch #: 3112080

Sample: 7693494-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/31/19 01:13

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0276	0.0300	92	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



# Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper

Work Orders : 647357,

Project ID:

Lab Batch #: 3112181

Sample: 7693497-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/01/20 22:37

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0338	0.0300	113	70-130	
4-Bromofluorobenzene	0.0270	0.0300	90	70-130	

Lab Batch #: 3112181

Sample: 7693497-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/01/20 22:58

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0341	0.0300	114	70-130	
4-Bromofluorobenzene	0.0277	0.0300	92	70-130	

Lab Batch #: 3112181

Sample: 647357-031 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/01/20 23:18

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0349	0.0300	116	70-130	
4-Bromofluorobenzene	0.0292	0.0300	97	70-130	

Lab Batch #: 3112181

Sample: 647357-031 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/01/20 23:38

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0295	0.0300	98	70-130	

Lab Batch #: 3112181

Sample: 7693497-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/02/20 00:48

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	70-130	
4-Bromofluorobenzene	0.0270	0.0300	90	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.





## Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper

Work Orders : 647357,

Project ID:

Lab Batch #: 3111577

Sample: 7693136-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/23/19 13:06

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	100	93	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

Lab Batch #: 3111577

Sample: 7693136-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/23/19 13:27

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	63.1	50.0	126	70-135	

Lab Batch #: 3111577

Sample: 7693136-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/23/19 13:48

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.8	100	98	70-135	
o-Terphenyl	48.1	50.0	96	70-135	

Lab Batch #: 3111577

Sample: 647357-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/23/19 14:30

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.9	107	70-135	
o-Terphenyl	51.8	50.0	104	70-135	

Lab Batch #: 3111577

Sample: 647357-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/23/19 14:52

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.7	107	70-135	
o-Terphenyl	52.6	49.9	105	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper

Work Orders : 647357,

Project ID:

Lab Batch #: 3111580

Sample: 7693138-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/23/19 13:06

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.2	100	88	70-135	
o-Terphenyl	45.4	50.0	91	70-135	

Lab Batch #: 3111580

Sample: 7693138-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/23/19 13:27

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	60.3	50.0	121	70-135	

Lab Batch #: 3111580

Sample: 7693138-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/23/19 13:48

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.6	100	98	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

Lab Batch #: 3111580

Sample: 647357-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/23/19 14:30

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.9	99.7	100	70-135	
o-Terphenyl	48.1	49.9	96	70-135	

Lab Batch #: 3111580

Sample: 647357-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/23/19 14:52

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.9	99.6	99	70-135	
o-Terphenyl	48.1	49.8	97	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



# Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper

Work Orders : 647357,

Project ID:

Lab Batch #: 3111702

Sample: 7693195-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/24/19 11:52

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.3	100	90	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 3111702

Sample: 7693195-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/24/19 12:13

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.6	100	97	70-135	
o-Terphenyl	46.9	50.0	94	70-135	

Lab Batch #: 3111702

Sample: 7693195-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 12/24/19 12:34

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 3111702

Sample: 647357-041 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/24/19 13:16

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	99.7	98	70-135	
o-Terphenyl	47.9	49.9	96	70-135	

Lab Batch #: 3111702

Sample: 647357-041 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 12/24/19 13:37

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.1	99.8	98	70-135	
o-Terphenyl	47.5	49.9	95	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## BS / BSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Analyst: KTL

Date Prepared: 12/29/2019

Date Analyzed: 12/29/2019

Lab Batch ID: 3111947

Sample: 7693451-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00200	0.100	0.108	108	0.100	0.105	105	3	70-130	35	
Toluene	<0.00200	0.100	0.0988	99	0.100	0.0979	98	1	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0998	100	0.100	0.101	101	1	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.200	0.206	103	1	70-130	35	
o-Xylene	<0.00200	0.100	0.100	100	0.100	0.102	102	2	70-130	35	

Analyst: KTL

Date Prepared: 12/29/2019

Date Analyzed: 12/30/2019

Lab Batch ID: 3112076

Sample: 7693461-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000385	0.100	0.0890	89	0.100	0.0930	93	4	70-130	35	
Toluene	<0.000456	0.100	0.0888	89	0.100	0.0902	90	2	70-130	35	
Ethylbenzene	<0.000565	0.100	0.0915	92	0.100	0.0925	93	1	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.189	95	0.200	0.190	95	1	70-130	35	
o-Xylene	<0.000344	0.100	0.0972	97	0.100	0.0978	98	1	70-130	35	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## BS / BSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Analyst: KTL

Date Prepared: 12/30/2019

Date Analyzed: 12/30/2019

Lab Batch ID: 3112080

Sample: 7693494-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.00200	0.100	0.107	107	0.100	0.0989	99	8	70-130	35	
Toluene	<0.00200	0.100	0.0984	98	0.100	0.0914	91	7	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0994	99	0.100	0.0923	92	7	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.200	100	0.200	0.187	94	7	70-130	35	
o-Xylene	<0.00200	0.100	0.100	100	0.100	0.0938	94	6	70-130	35	

Analyst: KTL

Date Prepared: 12/30/2019

Date Analyzed: 01/01/2020

Lab Batch ID: 3112181

Sample: 7693497-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000385	0.100	0.0994	99	0.100	0.0992	99	0	70-130	35	
Toluene	<0.000456	0.100	0.0896	90	0.100	0.0887	89	1	70-130	35	
Ethylbenzene	<0.000565	0.100	0.0900	90	0.100	0.0894	89	1	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.180	90	0.200	0.179	90	1	70-130	35	
o-Xylene	<0.000344	0.100	0.0901	90	0.100	0.0900	90	0	70-130	35	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## BS / BSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Analyst: CHE

Date Prepared: 12/23/2019

Date Analyzed: 12/23/2019

Lab Batch ID: 3111563

Sample: 7693114-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	264	106	250	274	110	4	90-110	20	

Analyst: CHE

Date Prepared: 12/23/2019

Date Analyzed: 12/23/2019

Lab Batch ID: 3111570

Sample: 7693141-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	249	100	250	249	100	0	90-110	20	

Analyst: CHE

Date Prepared: 12/23/2019

Date Analyzed: 12/23/2019

Lab Batch ID: 3111571

Sample: 7693142-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	258	103	250	253	101	2	90-110	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes





## BS / BSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Analyst: SPC

Date Prepared: 12/24/2019

Date Analyzed: 12/24/2019

Lab Batch ID: 3111703

Sample: 7693234-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
<b>Analytes</b>											
Chloride	<0.858	250	269	108	250	269	108	0	90-110	20	

Analyst: ARM

Date Prepared: 12/23/2019

Date Analyzed: 12/23/2019

Lab Batch ID: 3111577

Sample: 7693136-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
<b>Analytes</b>											
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	904	90	1000	876	88	3	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	906	91	1000	883	88	3	70-135	20	

Analyst: ARM

Date Prepared: 12/23/2019

Date Analyzed: 12/23/2019

Lab Batch ID: 3111580

Sample: 7693138-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
<b>Analytes</b>											
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	912	91	1000	898	90	2	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	902	90	1000	882	88	2	70-135	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## BS / BSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Analyst: ARM

Date Prepared: 12/24/2019

Date Analyzed: 12/24/2019

Lab Batch ID: 3111702

Sample: 7693195-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod  Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	926	93	1000	1000	100	8	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	953	95	1000	1020	102	7	70-135	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Lab Batch ID: 3111947

QC- Sample ID: 647357-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/29/2019

Date Prepared: 12/29/2019

Analyst: KTL

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0886	89	0.0998	0.0857	86	3	70-130	35	
Toluene	<0.00200	0.100	0.0834	83	0.0998	0.0799	80	4	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0849	85	0.0998	0.0807	81	5	70-130	35	
m,p-Xylenes	<0.00401	0.200	0.175	88	0.200	0.165	83	6	70-130	35	
o-Xylene	<0.00200	0.100	0.0877	88	0.0998	0.0823	82	6	70-130	35	

Lab Batch ID: 3112076

QC- Sample ID: 647242-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/30/2019

Date Prepared: 12/29/2019

Analyst: KTL

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000382	0.0992	0.0886	89	0.100	0.0778	78	13	70-130	35	
Toluene	0.000521	0.0992	0.0809	81	0.100	0.0657	65	21	70-130	35	X
Ethylbenzene	<0.000560	0.0992	0.0773	78	0.100	0.0587	59	27	70-130	35	X
m,p-Xylenes	<0.00101	0.198	0.157	79	0.200	0.117	59	29	70-130	35	X
o-Xylene	0.000371	0.0992	0.0827	83	0.100	0.0642	64	25	70-130	35	X

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
 Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Lab Batch ID: 3112080

QC- Sample ID: 647357-028 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/30/2019

Date Prepared: 12/30/2019

Analyst: KTL

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00201	0.100	0.0860	86	0.100	0.0960	96	11	70-130	35	
Toluene	<0.00201	0.100	0.0795	80	0.100	0.0896	90	12	70-130	35	
Ethylbenzene	<0.00201	0.100	0.0800	80	0.100	0.0902	90	12	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.161	80	0.200	0.182	91	12	70-130	35	
o-Xylene	<0.00201	0.100	0.0811	81	0.100	0.0917	92	12	70-130	35	

Lab Batch ID: 3112181

QC- Sample ID: 647357-031 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/01/2020

Date Prepared: 12/30/2019

Analyst: KTL

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00202	0.101	0.0762	75	0.0992	0.0734	74	4	70-130	35	
Toluene	<0.00202	0.101	0.0609	60	0.0992	0.0602	61	1	70-130	35	X
Ethylbenzene	<0.00202	0.101	0.0552	55	0.0992	0.0565	57	2	70-130	35	X
m,p-Xylenes	<0.00403	0.202	0.103	51	0.198	0.113	57	9	70-130	35	X
o-Xylene	<0.00202	0.101	0.0564	56	0.0992	0.0573	58	2	70-130	35	X

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
 Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Lab Batch ID: 3111563

QC- Sample ID: 646743-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/23/2019

Date Prepared: 12/23/2019

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	39.8	248	302	106	248	310	109	3	90-110	20	

Lab Batch ID: 3111563

QC- Sample ID: 647361-005 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/23/2019

Date Prepared: 12/23/2019

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	468	250	671	81	250	674	82	0	90-110	20	X

Lab Batch ID: 3111570

QC- Sample ID: 647357-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/23/2019

Date Prepared: 12/23/2019

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	573	251	828	102	251	818	98	1	90-110	20	

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
 Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Lab Batch ID: 3111570

QC- Sample ID: 647357-013 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/23/2019

Date Prepared: 12/23/2019

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	204	248	425	89	248	460	103	8	90-110	20	X

Lab Batch ID: 3111571

QC- Sample ID: 647357-023 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/23/2019

Date Prepared: 12/23/2019

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	84.4	248	342	104	248	338	102	1	90-110	20	

Lab Batch ID: 3111571

QC- Sample ID: 647357-033 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/24/2019

Date Prepared: 12/23/2019

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	63.4	252	324	103	252	323	103	0	90-110	20	

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
 Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.





## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Lab Batch ID: 3111703

QC- Sample ID: 647357-043 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/24/2019

Date Prepared: 12/24/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	9.15	250	286	111	250	285	110	0	90-110	20	X

Lab Batch ID: 3111703

QC- Sample ID: 647357-047 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/24/2019

Date Prepared: 12/24/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	31.6	252	310	110	252	308	110	1	90-110	20	

Lab Batch ID: 3111577

QC- Sample ID: 647357-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/23/2019

Date Prepared: 12/23/2019

Analyst: ARM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	964	96	997	976	98	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	999	964	96	997	986	99	2	70-135	20	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper

Work Order #: 647357

Project ID:

Lab Batch ID: 3111580

QC- Sample ID: 647357-021 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/23/2019

Date Prepared: 12/23/2019

Analyst: ARM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	892	89	996	892	90	0	70-135	20	
Diesel Range Organics (DRO)	<15.0	997	877	88	996	888	89	1	70-135	20	

Lab Batch ID: 3111702

QC- Sample ID: 647357-041 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/24/2019

Date Prepared: 12/24/2019

Analyst: ARM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	883	89	998	897	90	2	70-135	20	
Diesel Range Organics (DRO)	<15.0	997	893	90	998	906	91	1	70-135	20	

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
 Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West 1-20 East Odessa, TX 79765 (432)563-1800  
 Laboratory Address: 10000-0

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. # : 10471357

Field billable Hrs. :

TAT Work Days = D

Need results by: \_\_\_\_\_

Time: \_\_\_\_\_

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other \_\_\_\_\_

## ANALYSES REQUESTED

* Container Type Codes	
VA Vial Amber	ES Enore Sampler
VC Vial Clear	TS Terracore Sampler
VP Vial Pre-preserved	AC Air Center
GA Glass Amber	TB Tedlar Bag
GC Glass Clear	ZB Zip Lock Bag
PA Plastic Amber	PC Plastic Clear
Other _____	
** Preservative Type Codes	
Size(s) 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal 40ml, 125 ml, 250 ml, 500 ml, 1L, Other _____	
A None	E HCL
B HNO <sub>3</sub>	F MeOH
C H <sub>2</sub> SO <sub>4</sub>	G Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
D NaOH	H NaHSO <sub>4</sub>
I Ice	J MCAA
K ZnAcOH	L Aspic AcidNaOH
O _____	

Company: Etech Environmental		Phone: (575)396-2378	City: Lovington		State: NM	Zip: 88260	Email: pm@etechenvy.com		Project ID: Wrigley to Piper		PO#: _____	Invoice To: Ralph Tijerina, Goodnight Midstream		Quote #: _____
Sampler Name: Catalina Villa		Circle One Event: Daily		Weekly	Monthly	Quarterly	Matrix Code: _____		Field Filtered		Integrity OK (Y/N)	Total # of containers		
Sample #		Sample ID	Collect Date	Collect Time	Matrix Code	Field Filtered	Integrity OK (Y/N)	Total # of containers	Example Volatiles by 8260		# Cont		Lab Only:	
1		FS78A	12/16/2019				1		X	X	X		X	X
2		FS79	12/16/2019				1		X	X	X		X	X
3		FS80	12/17/2019				1		X	X	X		X	X
4		FS81	12/17/2019				1		X	X	X		X	X
5		FS82	12/17/2019				1		X	X	X		X	X
6		FS83	12/17/2019				1		X	X	X		X	X
7		FS84	12/17/2019				1		X	X	X		X	X
8		FS85	12/17/2019				1		X	X	X		X	X
9		FS86	12/18/2019				1		X	X	X		X	X
0		FS87	12/18/2019				1		X	X	X		X	X

## REMARKS

Hold Sample (CALL) Run PAH on Highest TPH Only if \_\_\_\_\_

Matrix Type Codes

GW Ground Water S Soil/Sediment/Solid  
 WW Waste Water W Wipe  
 DW Drinking Water A Air  
 SW Surface Water O Oil  
 OW Oceanic Water T Tissue  
 PL Product/Liquid U Urine  
 PS Product/Solid B Blood  
 SI Sludge  
 Other \_\_\_\_\_

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.  
 Revision Date: Nov 12, 2009





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HOUSTON-C

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. #:

Field billable Hrs.:

1047357

Company: Etech Environmental

Phone: (575)396-2378

TAT Work Days = D

Need results by:

Time:

Address: 3100 Plains Hwy.

Fax: (575)396-1429

Std (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

City: Lovington

State: NM Zip: 88260

PM/Attn: Lance Crenshaw

Email: pm@etechenv.com

Project ID: Wrigley to Piper

PO#:

Invoice To: Ralph Tijerina, Goodnight Midstream

Quote #:

Sample Name: Circle One Event: Daily Weekly Monthly Quarterly  
Semi-Annual Annual N/A

Field Filtered Integrity OK (Y/N) Total # of containers

Example Volatiles by 8260

TPH 8015M

BTEX

CI

Hold Sample (CALL) Run PAH on Highest TPH Only if

Matrix Type Codes

Preservative Type Codes

Container Type Codes

REMARKS

Lab Use Only

YES NO N/A

C.O.C. Serial #

Received on time to meet HTS?

Proper containers used?

pH verified-acceptable, excl VOCs?

VOCs rec'd w/o headspace?

Quatbody seals intact?

Received within holding time?

Labelled with proper preservatives?

Received on Wet Ice?

Samples intact upon arrival?

Non-Conformances found?

Lab Use Only

YES NO N/A

C.O.C. Serial #

Received on time to meet HTS?

Proper containers used?

pH verified-acceptable, excl VOCs?

VOCs rec'd w/o headspace?

Quatbody seals intact?

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Non-Conformances found?

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Received on time to meet HTS?

Proper containers used?

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Quatbody seals intact?

Received within holding time?

Labelled with proper preservatives?

Received on Wet Ice?

Samples intact upon arrival?

Non-Conformances found?

Lab Use Only

YES NO N/A

C.O.C. Serial #

Received on time to meet HTS?

Proper containers used?

pH verified-acceptable, excl VOCs?

VOCs rec'd w/o headspace?





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 i:rool-c

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. #:

Field billable Hrs:

TAT Work Days = D Need results by: Time:

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

* Container Type Codes	
VA Vial Amber	ES Encore Sampler
VC Vial Clear	TS TerraCore Sampler
VP Vial Pre-preserved	AC Air Canister
GA Glass Amber	TB Tedlar Bag
GC Glass Clear	ZB Zip Lock Bag
PA Plastic Amber	PC Plastic Clear
Other:	

## \*\* Preservative Type Codes

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal	
40ml, 125 ml, 250 ml, 500 ml, 1L, Other	
A. None	E. HCL
B. HNO <sub>3</sub>	F. MeOH
H <sub>2</sub> SO <sub>4</sub>	G. Na <sub>2</sub> SO <sub>3</sub>
D. NaOH	H. NaHSO <sub>4</sub>
	I. Ice
	J. MCAA
	K. ZnAcOH
	L. Aspic AcidNaOH
	C.

## ^ Matrix Type Codes

GW Ground Water	S Soil/Sediment/Solid
WW Waste Water	W Wipe
DW Drinking Water	A Air
SW Surface Water	O Oil
OW Ocean/Sea Water	T Tissue
PL Product-Liquid	U Urine
PS Product-Solid	B Blood
SL Sludge	
Other:	

## REMARKS

Hold Sample (CALL) Run PAH on Highest TPH Only If

Example Volatiles by 8260	
TPH 8015M	
BTEX	
IS	

# Cont Lab Only:

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	Field Filtered	Integrity OK (Y/N)	Total # of containers
1	NW35	12/18/2019				1	
2	NW36	12/18/2019				1	
3	NW37A	12/18/2019				1	
4	NW38	12/18/2019				1	
5	NW39	12/18/2019				1	
6	SW30F	12/18/2019				1	
7	SW31	12/17/2019				1	
8	SW32	12/17/2019				1	
9	SW33	12/17/2019				1	
0	SW34	12/17/2019				1	

Circle One Event: Daily Weekly Monthly Quarterly

Semi-Annual Annual N/A

Sample Name: Catalina Villa

Invoice To: Ralph Tijerina, Goodnight Midstream

Quote #:

Project ID: Wrigley to Piper

PM/Attn: Lance Crenshaw

Email: pm@etechemy.com

PO#: PM@etechemy.com

City: Lovington

State: NM

Zip: 88260

Address: 3100 Plains Hwy.

Fax: (575)396-1429

Phone: (575)396-2378

Company: Etech Environmental

Relinquished by

State for Certs & Regs

FL TX GA NC SC NJ PA OK LA

Other: AL NM Other:

QA/QC Level & Certification

1 2 3 4 CLP AFCEE QAPP

NEIAC DoD-ELAP Other:

EDDs

ADAPT SEDD ERPIIMS

Match Incomplete Absent Unclear

COC & Labels

1 2 3 0.8

Coolers Temp °C

Lab Use Only

YES NO N/A

Non-Conformance found?

Samples read upon arrival?

Received on Well log?

Labelled with proper preservation?

Received within holding time?

Custody seals intact?

VOCs rec'd w/o headspace?

Proper containers used?

pH verified-acceptable, excl VOCs?

Received on time to meet HTS?

C.O.C. Serial #

3&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330

ITS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

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Revision Date: Nov 12, 2009





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# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. #:

Field billable Hrs.:

Company: Ettech Environmental Phone: (575)396-2378

Address: 3100 Plains Hwy. Fax: (575)396-1429

City: Lovington State: NM Zip: 88260

PM/Attn: Lance Crenshaw Email: dm@etechnv.com

Project ID: Wrigley to Piper PO#: PAA-C, Bryant

Invoice To: Ralph Tijerina, Goodnight Midstream Quote #:

Sampler Name: Circle One Event: Daily Weekly Monthly Quarterly  
Catalina Villa Semi-Annual Annual N/A

Sample # Sample ID Collect Date Collect Time Matrix Code Field Filtered Integrity OK (Y/N) Total # of containers

1 FS 93A 12/19/2019 9:15 1

2 FS 94A 12/19/2019 9:20 1

3 FS 95A 12/19/2019 11:10 1

4 FS 96 12/19/2019 12:40 1

5 FS 97 12/19/2019 14:55 1

6 NW 40A 12/19/2019 9:10 1

7 NW 41 12/19/2019 10:10 1

8 SW 40 12/19/2019 8:10 1

9 SW 41A 12/19/2019 11:05 1

0 SW 42 12/19/2019 12:35 1

Reg. Program / Clean-up Sid STATE for Certs & Regs

QA/QC Level & Certification

EDDS

COC & Labels

Coolers Temp °C

Lab Use Only

YES NO N/A

Non-Conformances Found?

Samples Initd upon arrival?

Labelled with proper preservatives?

Received within holding time?

Custody seals intact?

VOCs rec'd w/o headspace?

Proper containers used?

pH verified acceptable, excl VOCs?

Received on time to meet HTS?

C.O.C. Serial #

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TAT Work Days = D Need results by: Time:

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

Example Volatiles by 8260

TPH 8015M

BTEX

C

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

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Container Type Codes

ES Encore Sampler

TS TargetCore Sampler

AC Air Canister

TA Teller Bag

ZB Zip Lock Bag

PC Plastic Clear

PC Plastic Amber

PC Plastic Clear

PC Plastic Amber

PC Plastic Clear

PC Plastic Amber

PC Plastic Clear

PC Plastic Amber

PC Plastic Clear

PC Plastic Amber

PC Plastic Clear

PC Plastic Amber

PC Plastic Clear

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PC Plastic Amber





Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West 120 East Odessa, TX 79765 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. #: 647357

Field billable Hrs: 0

Company: Etech Environmental

Phone: (575)396-2378

Address: 3100 Plains Hwy.

Fax: (575)396-1429

City: Lovington

State: NM Zip: 88260

PM/Attn: Lance Crenshaw

Email: pm@etechenv.com

Project ID: Wrigley to Piper

PO#: 1

Invoice To: Ralph Tijerina, Goodnight Midstream

Quote #:

Sampler Name: Catalina Villa

Circle One Event: Daily Weekly Monthly Quarterly

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	Field Filtered	Integrity OK (Y/N)	Total # of containers
----------	-----------	--------------	--------------	-------------	----------------	--------------------	-----------------------

Example Volatiles by 8260

TPH 8015M

BTEX

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

1	SW35	12/18/2019				1	
---	------	------------	--	--	--	---	--

2	SW36A	12/18/2019				1	
---	-------	------------	--	--	--	---	--

3	SW37	12/18/2019				1	
---	------	------------	--	--	--	---	--

4	SW38B	12/18/2019				1	
---	-------	------------	--	--	--	---	--

5	SW39	12/18/2019				1	
---	------	------------	--	--	--	---	--

6	EWN1	12/17/2019				1	
---	------	------------	--	--	--	---	--

7	WWN1D	12/17/2019				1	
---	-------	------------	--	--	--	---	--

8							
---	--	--	--	--	--	--	--

9							
---	--	--	--	--	--	--	--

0							
---	--	--	--	--	--	--	--

1	SW35	12/18/2019				1	
---	------	------------	--	--	--	---	--

2	SW36A	12/18/2019				1	
---	-------	------------	--	--	--	---	--

3	SW37	12/18/2019				1	
---	------	------------	--	--	--	---	--

4	SW38B	12/18/2019				1	
---	-------	------------	--	--	--	---	--

5	SW39	12/18/2019				1	
---	------	------------	--	--	--	---	--

6	EWN1	12/17/2019				1	
---	------	------------	--	--	--	---	--

7	WWN1D	12/17/2019				1	
---	-------	------------	--	--	--	---	--

8							
---	--	--	--	--	--	--	--

9							
---	--	--	--	--	--	--	--

0							
---	--	--	--	--	--	--	--

1	SW35	12/18/2019				1	
---	------	------------	--	--	--	---	--

2	SW36A	12/18/2019				1	
---	-------	------------	--	--	--	---	--

3	SW37	12/18/2019				1	
---	------	------------	--	--	--	---	--

4	SW38B	12/18/2019				1	
---	-------	------------	--	--	--	---	--

5	SW39	12/18/2019				1	
---	------	------------	--	--	--	---	--

6	EWN1	12/17/2019				1	
---	------	------------	--	--	--	---	--

7	WWN1D	12/17/2019				1	
---	-------	------------	--	--	--	---	--

8							
---	--	--	--	--	--	--	--

9							
---	--	--	--	--	--	--	--

0							
---	--	--	--	--	--	--	--

1	SW35	12/18/2019				1	
---	------	------------	--	--	--	---	--

2	SW36A	12/18/2019				1	
---	-------	------------	--	--	--	---	--

3	SW37	12/18/2019				1	
---	------	------------	--	--	--	---	--

4	SW38B	12/18/2019				1	
---	-------	------------	--	--	--	---	--

5	SW39	12/18/2019				1	
---	------	------------	--	--	--	---	--

6	EWN1	12/17/2019				1	
---	------	------------	--	--	--	---	--

7	WWN1D	12/17/2019				1	
---	-------	------------	--	--	--	---	--

8							
---	--	--	--	--	--	--	--

9							
---	--	--	--	--	--	--	--

0							
---	--	--	--	--	--	--	--

1	SW35	12/18/2019				1	
---	------	------------	--	--	--	---	--

2	SW36A	12/18/2019				1	
---	-------	------------	--	--	--	---	--

3	SW37	12/18/2019				1	
---	------	------------	--	--	--	---	--

4	SW38B	12/18/2019				1	
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5	SW39	12/18/2019				1	
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6	EWN1	12/17/2019				1	
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7	WWN1D	12/17/2019				1	
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1	SW35	12/18/2019				1	
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2	SW36A	12/18/2019				1	
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3	SW37	12/18/2019				1	
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4	SW38B	12/18/2019				1	
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5	SW39	12/18/2019				1	
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6	EWN1	12/17/2019				1	
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7	WWN1D	12/17/2019				1	
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1	SW35	12/18/2019				1	
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2	SW36A	12/18/2019				1	
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3	SW37	12/18/2019				1	
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4	SW38B	12/18/2019				1	
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5	SW39	12/18/2019				1	
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6	EWN1	12/17/2019				1	
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7	WWN1D	12/17/2019				1	
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1	SW35	12/18/2019				1	
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2	SW36A	12/18/2019				1	
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3	SW37	12/18/2019				1	
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4	SW38B	12/18/2019				1	
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5	SW39	12/18/2019				1	
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6	EWN1	12/17/2019				1	
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7	WWN1D	12/17/2019				1	
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1	SW35	12/18/2019				1	
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2	SW36A	12/18/2019				1	
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3	SW37	12/18/2019				1	
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4	SW38B	12/18/2019				1	
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5	SW39	12/18/2019				1	
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6	EWN1	12/17/2019				1	
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7	WWN1D	12/17/2019				1	
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1	SW35	12/18/2019				1	
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2	SW36A	12/18/2019				1	
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3	SW37	12/18/2019				1	
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4	SW38B	12/18/2019				1	
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5	SW39	12/18/2019				1	
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6	EWN1	12/17/2019				1	
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7	WWN1D	12/17/2019				1	
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1	SW35	12/18/2019				1	
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2	SW36A	12/18/2019				1	
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3	SW37	12/18/2019				1	
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4	SW38B	12/18/2019				1	
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5	SW39	12/18/2019				1	
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6	EWN1	12/17/2019				1	
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7	WWN1D	12/17/2019				1	
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1	SW35	12/18/2019				1	
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2	SW36A	12/18/2019				1	
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3	SW37	12/18/2019				1	
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4	SW38B	12/18/2019				1	
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5	SW39	12/18/2019				1	
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6	EWN1	12/17/2019				1	
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7	WWN1D	12/17/2019				1	
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1	SW35	12
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## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental &amp; Safety Solution, ll

Date/ Time Received: 12/23/2019 11:30:00 AM

Work Order #: 647357

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 12/23/2019

Checklist reviewed by:

Jessica Kramer

Date: 12/23/2019

# **Analytical Report 647939**

**for**  
**Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**  
**Wrigley to Piper Pipeline**

**13-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



13-JAN-20

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **647939**  
**Wrigley to Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 647939. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 647939 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 647939****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley to Piper Pipeline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SFFL1	S	12-30-19 00:00		647939-001
SFFL2	S	12-30-19 00:00		647939-002
SFFL3	S	12-31-19 00:00		647939-003
SFFL4	S	12-31-19 00:00		647939-004
SFWW1	S	12-30-19 00:00		647939-005
SFWW2	S	12-30-19 00:00		647939-006
SFWW3	S	12-31-19 00:00		647939-007
SFWW4	S	12-31-19 00:00		647939-008
WW12	S	12-30-19 00:00		647939-009
EW15	S	12-30-19 00:00		647939-010
SFEW1	S	12-30-19 00:00		647939-011
SFEW2	S	12-30-19 00:00		647939-012
SFEW3	S	12-31-19 00:00		647939-013
SFE4	S	12-31-19 00:00		647939-014





## CASE NARRATIVE

**Client Name:** *Etech Environmental & Safety Solution, Inc*

**Project Name:** *Wrigley to Piper Pipeline*

Project ID:

Work Order Number(s): 647939

Report Date: 13-JAN-20

Date Received: 01/06/2020

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3112472 Chloride by EPA 300

Lab Sample ID 647940-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647939-010, -011, -012, -013, -014.

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

Batch: LBA-3112996 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.





# Certificate of Analytical Results

647939



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: **SFFL1**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-001

Date Collected: 12.30.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	36.8	5.03	0.864	mg/kg	01.06.20 21:08		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.06.20 17:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.06.20 17:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.06.20 17:00	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.06.20 17:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	116	70 - 135	%		
o-Terphenyl	114	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0186	0.0186	0.00842	mg/kg	01.10.20 22:18	U	19
Toluene	108-88-3	<0.0186	0.0186	0.00436	mg/kg	01.10.20 22:18	U	19
Ethylbenzene	100-41-4	<0.0186	0.0186	0.00574	mg/kg	01.10.20 22:18	U	19
m,p-Xylenes	179601-23-1	<0.0372	0.0372	0.00635	mg/kg	01.10.20 22:18	U	19
o-Xylene	95-47-6	<0.0186	0.0186	0.00635	mg/kg	01.10.20 22:18	U	19
Total Xylenes	1330-20-7	<0.0186		0.00635	mg/kg	01.10.20 22:18	U	
Total BTEX		<0.0186		0.00436	mg/kg	01.10.20 22:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	82	68 - 120	%		
a,a,a-Trifluorotoluene	94	71 - 121	%		



# Certificate of Analytical Results

## 647939



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFFL2**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-002

Date Collected: 12.30.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	576	4.96	0.852	mg/kg	01.06.20 21:15		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.06.20 18:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.06.20 18:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.06.20 18:03	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.06.20 18:03	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	117	70 - 135	%		
o-Terphenyl	117	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0188	0.0188	0.00848	mg/kg	01.10.20 22:42	U	19
Toluene	108-88-3	<0.0188	0.0188	0.00439	mg/kg	01.10.20 22:42	U	19
Ethylbenzene	100-41-4	<0.0188	0.0188	0.00578	mg/kg	01.10.20 22:42	U	19
m,p-Xylenes	179601-23-1	<0.0375	0.0375	0.00640	mg/kg	01.10.20 22:42	U	19
o-Xylene	95-47-6	<0.0188	0.0188	0.00640	mg/kg	01.10.20 22:42	U	19
Total Xylenes	1330-20-7	<0.0188		0.00640	mg/kg	01.10.20 22:42	U	
Total BTEX		<0.0188		0.00439	mg/kg	01.10.20 22:42	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	80	68 - 120	%		
a,a,a-Trifluorotoluene	93	71 - 121	%		



# Certificate of Analytical Results

647939



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: **SFFL3**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-003

Date Collected: 12.31.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	445	4.95	0.850	mg/kg	01.06.20 21:35		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.06.20 18:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.06.20 18:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.06.20 18:24	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.06.20 18:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	116	70 - 135	%		
o-Terphenyl	117	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0180	0.0180	0.00813	mg/kg	01.10.20 23:05	U	18
Toluene	108-88-3	<0.0180	0.0180	0.00421	mg/kg	01.10.20 23:05	U	18
Ethylbenzene	100-41-4	<0.0180	0.0180	0.00554	mg/kg	01.10.20 23:05	U	18
m,p-Xylenes	179601-23-1	<0.0360	0.0360	0.00613	mg/kg	01.10.20 23:05	U	18
o-Xylene	95-47-6	<0.0180	0.0180	0.00613	mg/kg	01.10.20 23:05	U	18
Total Xylenes	1330-20-7	<0.0180		0.00613	mg/kg	01.10.20 23:05	U	
Total BTEX		<0.0180		0.00421	mg/kg	01.10.20 23:05	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	81	68 - 120	%		
a,a,a-Trifluorotoluene	96	71 - 121	%		



# Certificate of Analytical Results

## 647939



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFFL4**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-004

Date Collected: 12.31.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	202	4.95	0.850	mg/kg	01.06.20 21:41		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.06.20 18:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.06.20 18:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.06.20 18:45	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.06.20 18:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	115	70 - 135	%		
o-Terphenyl	116	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0197	0.0197	0.00890	mg/kg	01.10.20 23:29	U	20
Toluene	108-88-3	<0.0197	0.0197	0.00461	mg/kg	01.10.20 23:29	U	20
Ethylbenzene	100-41-4	<0.0197	0.0197	0.00606	mg/kg	01.10.20 23:29	U	20
m,p-Xylenes	179601-23-1	<0.0394	0.0394	0.00671	mg/kg	01.10.20 23:29	U	20
o-Xylene	95-47-6	<0.0197	0.0197	0.00671	mg/kg	01.10.20 23:29	U	20
Total Xylenes	1330-20-7	<0.0197		0.00671	mg/kg	01.10.20 23:29	U	
Total BTEX		<0.0197		0.00461	mg/kg	01.10.20 23:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	80	68 - 120	%		
a,a,a-Trifluorotoluene	94	71 - 121	%		



# Certificate of Analytical Results

647939



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFWW1

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-005

Date Collected: 12.30.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<4.95	4.95	0.850	mg/kg	01.06.20 21:48	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.06.20 19:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.06.20 19:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.06.20 19:07	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.06.20 19:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	114	70 - 135	%		
o-Terphenyl	116	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0198	0.0198	0.00897	mg/kg	01.10.20 23:53	U	20
Toluene	108-88-3	<0.0198	0.0198	0.00464	mg/kg	01.10.20 23:53	U	20
Ethylbenzene	100-41-4	<0.0198	0.0198	0.00611	mg/kg	01.10.20 23:53	U	20
m,p-Xylenes	179601-23-1	<0.0397	0.0397	0.00677	mg/kg	01.10.20 23:53	U	20
o-Xylene	95-47-6	<0.0198	0.0198	0.00677	mg/kg	01.10.20 23:53	U	20
Total Xylenes	1330-20-7	<0.0198		0.00677	mg/kg	01.10.20 23:53	U	
Total BTEX		<0.0198		0.00464	mg/kg	01.10.20 23:53	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	79	68 - 120	%		
a,a,a-Trifluorotoluene	90	71 - 121	%		



# Certificate of Analytical Results

## 647939



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFWW2**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-006

Date Collected: 12.30.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	482	5.05	0.867	mg/kg	01.06.20 21:55		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.06.20 19:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.06.20 19:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.06.20 19:28	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.06.20 19:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	130	70 - 135	%		
o-Terphenyl	133	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0200	0.0200	0.00902	mg/kg	01.11.20 00:17	U	20
Toluene	108-88-3	<0.0200	0.0200	0.00467	mg/kg	01.11.20 00:17	U	20
Ethylbenzene	100-41-4	<0.0200	0.0200	0.00615	mg/kg	01.11.20 00:17	U	20
m,p-Xylenes	179601-23-1	<0.0399	0.0399	0.00681	mg/kg	01.11.20 00:17	U	20
o-Xylene	95-47-6	<0.0200	0.0200	0.00681	mg/kg	01.11.20 00:17	U	20
Total Xylenes	1330-20-7	<0.0200		0.00681	mg/kg	01.11.20 00:17	U	
Total BTEX		<0.0200		0.00467	mg/kg	01.11.20 00:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	85	68 - 120	%		
a,a,a-Trifluorotoluene	100	71 - 121	%		





## Certificate of Analytical Results

647939



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFWW3

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-007

Date Collected: 12.31.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1380	5.03	0.864	mg/kg	01.06.20 22:01		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	01.06.20 19:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	01.06.20 19:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	01.06.20 19:49	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	01.06.20 19:49	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	128	70 - 135	%		
o-Terphenyl	130	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0182	0.0182	0.00822	mg/kg	01.11.20 00:41	U	18
Toluene	108-88-3	<0.0182	0.0182	0.00425	mg/kg	01.11.20 00:41	U	18
Ethylbenzene	100-41-4	<0.0182	0.0182	0.00560	mg/kg	01.11.20 00:41	U	18
m,p-Xylenes	179601-23-1	<0.0364	0.0364	0.00620	mg/kg	01.11.20 00:41	U	18
o-Xylene	95-47-6	<0.0182	0.0182	0.00620	mg/kg	01.11.20 00:41	U	18
Total Xylenes	1330-20-7	<0.0182		0.00620	mg/kg	01.11.20 00:41	U	
Total BTEX		<0.0182		0.00425	mg/kg	01.11.20 00:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	79	68 - 120	%		
a,a,a-Trifluorotoluene	92	71 - 121	%		



## Certificate of Analytical Results

647939



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFWW4

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-008

Date Collected: 12.31.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	103	5.00	0.858	mg/kg	01.06.20 22:08		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.06.20 20:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.06.20 20:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.06.20 20:11	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.06.20 20:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	114	70 - 135	%		
o-Terphenyl	114	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0171	0.0171	0.00774	mg/kg	01.11.20 01:05	U	17
Toluene	108-88-3	<0.0171	0.0171	0.00401	mg/kg	01.11.20 01:05	U	17
Ethylbenzene	100-41-4	<0.0171	0.0171	0.00527	mg/kg	01.11.20 01:05	U	17
m,p-Xylenes	179601-23-1	<0.0342	0.0342	0.00584	mg/kg	01.11.20 01:05	U	17
o-Xylene	95-47-6	<0.0171	0.0171	0.00584	mg/kg	01.11.20 01:05	U	17
Total Xylenes	1330-20-7	<0.0171		0.00584	mg/kg	01.11.20 01:05	U	
Total BTEX		<0.0171		0.00401	mg/kg	01.11.20 01:05	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	78	68 - 120	%		
a,a,a-Trifluorotoluene	94	71 - 121	%		



## Certificate of Analytical Results

647939



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: WW12

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-009

Date Collected: 12.30.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	12.4	5.02	0.862	mg/kg	01.06.20 22:15		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.06.20 20:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.06.20 20:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.06.20 20:31	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.06.20 20:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	116	70 - 135	%		
o-Terphenyl	116	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0198	0.0198	0.00895	mg/kg	01.11.20 01:29	U	20
Toluene	108-88-3	<0.0198	0.0198	0.00463	mg/kg	01.11.20 01:29	U	20
Ethylbenzene	100-41-4	<0.0198	0.0198	0.00610	mg/kg	01.11.20 01:29	U	20
m,p-Xylenes	179601-23-1	<0.0396	0.0396	0.00675	mg/kg	01.11.20 01:29	U	20
o-Xylene	95-47-6	<0.0198	0.0198	0.00675	mg/kg	01.11.20 01:29	U	20
Total Xylenes	1330-20-7	<0.0198		0.00675	mg/kg	01.11.20 01:29	U	
Total BTEX		<0.0198		0.00463	mg/kg	01.11.20 01:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	80	68 - 120	%		
a,a,a-Trifluorotoluene	95	71 - 121	%		



# Certificate of Analytical Results

647939



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: **EW15**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-010

Date Collected: 12.30.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	823	5.02	0.862	mg/kg	01.06.20 22:54		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.06.20 20:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.06.20 20:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.06.20 20:52	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.06.20 20:52	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	115	70 - 135	%		
o-Terphenyl	117	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0195	0.0195	0.00879	mg/kg	01.11.20 03:04	U	19
Toluene	108-88-3	<0.0195	0.0195	0.00455	mg/kg	01.11.20 03:04	U	19
Ethylbenzene	100-41-4	<0.0195	0.0195	0.00599	mg/kg	01.11.20 03:04	U	19
m,p-Xylenes	179601-23-1	<0.0389	0.0389	0.00663	mg/kg	01.11.20 03:04	U	19
o-Xylene	95-47-6	<0.0195	0.0195	0.00663	mg/kg	01.11.20 03:04	U	19
Total Xylenes	1330-20-7	<0.0195		0.00663	mg/kg	01.11.20 03:04	U	
Total BTEX		<0.0195		0.00455	mg/kg	01.11.20 03:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	87	68 - 120	%		
a,a,a-Trifluorotoluene	97	71 - 121	%		



# Certificate of Analytical Results

## 647939



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFEW1**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-011

Date Collected: 12.30.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	6.16	4.99	0.857	mg/kg	01.06.20 23:14		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.06.20 21:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.06.20 21:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.06.20 21:34	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.06.20 21:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	109	70 - 135	%		
o-Terphenyl	110	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0196	0.0196	0.00888	mg/kg	01.11.20 03:28	U	20
Toluene	108-88-3	<0.0196	0.0196	0.00460	mg/kg	01.11.20 03:28	U	20
Ethylbenzene	100-41-4	<0.0196	0.0196	0.00605	mg/kg	01.11.20 03:28	U	20
m,p-Xylenes	179601-23-1	<0.0393	0.0393	0.00670	mg/kg	01.11.20 03:28	U	20
o-Xylene	95-47-6	<0.0196	0.0196	0.00670	mg/kg	01.11.20 03:28	U	20
Total Xylenes	1330-20-7	<0.0196		0.00670	mg/kg	01.11.20 03:28	U	
Total BTEX		<0.0196		0.00460	mg/kg	01.11.20 03:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	97	68 - 120	%		
a,a,a-Trifluorotoluene	117	71 - 121	%		



## Certificate of Analytical Results

647939



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFEW2

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-012

Date Collected: 12.30.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<4.97	4.97	0.853	mg/kg	01.06.20 23:21	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	01.06.20 21:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	01.06.20 21:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	01.06.20 21:55	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	01.06.20 21:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	114	70 - 135	%		
o-Terphenyl	116	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0174	0.0174	0.00785	mg/kg	01.11.20 03:52	U	17
Toluene	108-88-3	<0.0174	0.0174	0.00406	mg/kg	01.11.20 03:52	U	17
Ethylbenzene	100-41-4	<0.0174	0.0174	0.00535	mg/kg	01.11.20 03:52	U	17
m,p-Xylenes	179601-23-1	<0.0347	0.0347	0.00592	mg/kg	01.11.20 03:52	U	17
o-Xylene	95-47-6	<0.0174	0.0174	0.00592	mg/kg	01.11.20 03:52	U	17
Total Xylenes	1330-20-7	<0.0174		0.00592	mg/kg	01.11.20 03:52	U	
Total BTEX		<0.0174		0.00406	mg/kg	01.11.20 03:52	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	85	68 - 120	%		
a,a,a-Trifluorotoluene	100	71 - 121	%		





# Certificate of Analytical Results

## 647939



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFEW3**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647939-013

Date Collected: 12.31.19 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	193	4.96	0.852	mg/kg	01.06.20 23:28		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.06.20 22:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.06.20 22:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.06.20 22:15	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.06.20 22:15	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	110	70 - 135	%		
o-Terphenyl	110	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0171	0.0171	0.00774	mg/kg	01.11.20 04:15	U	17
Toluene	108-88-3	<0.0171	0.0171	0.00401	mg/kg	01.11.20 04:15	U	17
Ethylbenzene	100-41-4	<0.0171	0.0171	0.00527	mg/kg	01.11.20 04:15	U	17
m,p-Xylenes	179601-23-1	<0.0342	0.0342	0.00584	mg/kg	01.11.20 04:15	U	17
o-Xylene	95-47-6	<0.0171	0.0171	0.00584	mg/kg	01.11.20 04:15	U	17
Total Xylenes	1330-20-7	<0.0171		0.00584	mg/kg	01.11.20 04:15	U	
Total BTEX		<0.0171		0.00401	mg/kg	01.11.20 04:15	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	81	68 - 120	%		
a,a,a-Trifluorotoluene	94	71 - 121	%		



# Certificate of Analytical Results

## 647939



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFE4** Matrix: Soil Sample Depth:

Lab Sample Id: 647939-014 Date Collected: 12.31.19 00.00 Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: CHE % Moist: Tech: CHE

Seq Number: 3112472 Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	18.1	5.04	0.865	mg/kg	01.06.20 23:34		1

Analytical Method: TPH By SW8015 Mod Prep Method: 8015

Analyst: DVM % Moist: Tech: DVM

Seq Number: 3112551 Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.06.20 22:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.06.20 22:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.06.20 22:36	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.06.20 22:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	113	70 - 135	%		
o-Terphenyl	113	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112996 Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21 Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0195	0.0195	0.00881	mg/kg	01.10.20 20:43	U	19
Toluene	108-88-3	<0.0195	0.0195	0.00456	mg/kg	01.10.20 20:43	U	19
Ethylbenzene	100-41-4	<0.0195	0.0195	0.00600	mg/kg	01.10.20 20:43	U	19
m,p-Xylenes	179601-23-1	<0.0390	0.0390	0.00665	mg/kg	01.10.20 20:43	U	19
o-Xylene	95-47-6	<0.0195	0.0195	0.00665	mg/kg	01.10.20 20:43	U	19
Total Xylenes	1330-20-7	<0.0195		0.00665	mg/kg	01.10.20 20:43	U	
Total BTEX		<0.0195		0.00456	mg/kg	01.10.20 20:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	81	68 - 120	%		
a,a,a-Trifluorotoluene	93	71 - 121	%		



# Certificate of Analytical Results

## 647939



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **7693775-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7693775-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112470

Date Prep: 01.06.20 14.30

Prep seq: 7693775

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	01.06.20 18:55	U	1

Sample Id: **7693776-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7693776-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	01.06.20 22:35	U	1

Sample Id: **7693789-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7693789-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3112551

Date Prep: 01.06.20 14.00

Prep seq: 7693789

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.06.20 15:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.06.20 15:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.06.20 15:57	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	98	70 - 135	%		



# Certificate of Analytical Results

## 647939



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **7694133-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7694133-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3112996

Date Prep: 01.10.20 10.30

Subcontractor: SUB: T104704219-19-21

Prep seq: 7694133

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.0200	0.0200	0.00904	mg/kg	01.10.20 20:20	U	20
Toluene	108-88-3	<0.0200	0.0200	0.00468	mg/kg	01.10.20 20:20	U	20
Ethylbenzene	100-41-4	<0.0200	0.0200	0.00616	mg/kg	01.10.20 20:20	U	20
m,p-Xylenes	179601-23-1	<0.0400	0.0400	0.00682	mg/kg	01.10.20 20:20	U	20
o-Xylene	95-47-6	<0.0200	0.0200	0.00682	mg/kg	01.10.20 20:20	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	103	68 - 120	%		
a,a,a-Trifluorotoluene	116	71 - 121	%		



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



## Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper Pipeline

Work Orders 647939,

Project ID:

Lab Batch #: 3112996

Sample: 7694133-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/10/20 18:43

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0829	0.100	83	68-120	
a,a,a-Trifluorotoluene	1.79	2.00	90	71-121	

Lab Batch #: 3112996

Sample: 7694133-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/10/20 19:08

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0850	0.100	85	68-120	
a,a,a-Trifluorotoluene	1.85	2.00	93	71-121	

Lab Batch #: 3112996

Sample: 7694133-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/10/20 20:20

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.103	0.100	103	68-120	
a,a,a-Trifluorotoluene	2.32	2.00	116	71-121	

Lab Batch #: 3112996

Sample: 647939-014 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/10/20 21:07

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0780	0.100	78	68-120	
a,a,a-Trifluorotoluene	1.89	1.98	95	71-121	

Lab Batch #: 3112996

Sample: 647939-014 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/10/20 21:30

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0747	0.100	75	68-120	
a,a,a-Trifluorotoluene	1.82	1.99	91	71-121	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.





## Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper Pipeline

Work Orders 647939,

Project ID:

Lab Batch #: 3112551

Sample: 7693789-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/06/20 15:57

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.6	100	98	70-135	
o-Terphenyl	48.9	50.0	98	70-135	

Lab Batch #: 3112551

Sample: 7693789-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/06/20 16:18

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	53.4	50.0	107	70-135	

Lab Batch #: 3112551

Sample: 7693789-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/06/20 16:39

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	53.2	50.0	106	70-135	

Lab Batch #: 3112551

Sample: 647939-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/20 17:21

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.7	123	70-135	
o-Terphenyl	59.2	49.9	119	70-135	

Lab Batch #: 3112551

Sample: 647939-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/20 17:42

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.9	124	70-135	
o-Terphenyl	59.6	50.0	119	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## BS / BSD Recoveries



Project Name: Wrigley to Piper Pipeline

Work Order #: 647939

Project ID:

Analyst: MIT

Date Prepared: 01/10/2020

Date Analyzed: 01/10/2020

Lab Batch ID: 3112996

Sample: 7694133-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.0200	2.00	1.93	97	2.00	1.94	97	1	55-120	20	
Toluene	<0.0200	2.00	1.89	95	2.00	1.86	93	2	77-120	20	
Ethylbenzene	<0.0200	2.00	1.95	98	2.00	1.93	97	1	77-120	20	
m,p-Xylenes	<0.0400	4.00	3.91	98	4.00	3.88	97	1	78-120	20	
o-Xylene	<0.0200	2.00	1.97	99	2.00	1.96	98	1	78-120	20	

Analyst: CHE

Date Prepared: 01/06/2020

Date Analyzed: 01/06/2020

Lab Batch ID: 3112470

Sample: 7693775-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	256	102	250	258	103	1	90-110	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## BS / BSD Recoveries



Project Name: Wrigley to Piper Pipeline

Work Order #: 647939

Project ID:

Analyst: CHE

Date Prepared: 01/06/2020

Date Analyzed: 01/06/2020

Lab Batch ID: 3112472

Sample: 7693776-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	266	106	250	265	106	0	90-110	20	

Analyst: DVM

Date Prepared: 01/06/2020

Date Analyzed: 01/06/2020

Lab Batch ID: 3112551

Sample: 7693789-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	885	89	1000	896	90	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	903	90	1000	891	89	1	70-135	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper Pipeline

Work Order #: 647939

Project ID:

Lab Batch ID: 3112996

QC- Sample ID: 647939-014 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/10/2020

Date Prepared: 01/10/2020

Analyst: MIT

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.0198	1.98	1.74	88	1.99	1.82	91	4	54-120	25	
Toluene	<0.0198	1.98	1.71	86	1.99	1.80	90	5	57-120	25	
Ethylbenzene	<0.0198	1.98	1.71	86	1.99	1.81	91	6	58-131	25	
m,p-Xylenes	<0.0397	3.97	3.41	86	3.98	3.61	91	6	62-124	25	
o-Xylene	<0.0198	1.98	1.68	85	1.99	1.81	91	7	62-124	25	

Lab Batch ID: 3112470

QC- Sample ID: 647938-022 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/06/2020

Date Prepared: 01/06/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	848	253	1090	96	253	1170	127	7	90-110	20	X

Lab Batch ID: 3112470

QC- Sample ID: 647938-025 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/06/2020

Date Prepared: 01/06/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	590	250	813	89	250	815	90	0	90-110	20	X

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper Pipeline

Work Order #: 647939

Project ID:

Lab Batch ID: 3112472

QC- Sample ID: 647939-010 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/06/2020

Date Prepared: 01/06/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	823	251	1080	102	251	1110	114	3	90-110	20	X

Lab Batch ID: 3112472

QC- Sample ID: 647940-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/07/2020

Date Prepared: 01/06/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.39	252	275	108	252	280	110	2	90-110	20	

Lab Batch ID: 3112551

QC- Sample ID: 647939-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/06/2020

Date Prepared: 01/06/2020

Analyst: DVM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	904	91	999	917	92	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	997	914	92	999	922	92	1	70-135	20	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times [(C-F)/(C+F)]$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.





Houston: 4143 Greenbrier Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800  
jrc@xco-lc

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. #:

047931

Field billable Hrs:

TAT Work Days = D Need results by: Time:

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

## ANALYSES REQUESTED

* Container Type Codes	
VA Vial Amber	ES Enco Sample
VC Vial Clear	TS Tetracore Sample
VP Vial Pre-preserved	AC Air Canister
GA Glass Amber	TB Teller Bag
GC Glass Clear	ZB Zip Lock Bag
PA Plastic Amber	PC Plastic Clear
Other	

Size(s): 2oz 4oz, 8oz, 16oz 32oz, 1Gal  
40ml, 125 ml, 250 ml, 500 ml, 1L, Other

## \*\* Preservative Type Codes

A. None	E. HCl	I. Ice
B. HNO <sub>3</sub>	F. MeOH	J. MCAA
C. H <sub>2</sub> SO <sub>4</sub>	G. Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	K. ZnAcOAcOH
D. NaOH	H. NaHSO <sub>4</sub>	L. Ascorbic Acid/NaOH
O.		

## Matrix Type Codes

GW Ground Water	S Soil/Sediment/Solid
WW Waste Water	W Wipe
DW Drinking Water	A Air
SW Surface Water	O Oil
OW Ocean/Sea Water	T Tissue
PL Product-Liquid	U Urine
PS Product-Solid	B Blood
SL Sludge	

## REMARKS

Company: Etech Environmental		Phone: (575)396-2378		TAT Work Days = D Need results by: Time:										
Address: 3100 Plains Hwy.		Fax: (575)396-1429		Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other										
City: Lovington		State: NM Zip: 88260												
PM/Attn: Joel Lowry		Email: pm@etechenv.com												
Project ID: Wrigley to Piper Pipeline		PC#: PAA-C, Bryant												
Invoice To: Ralph Tillerina, Goodnight Midstream		Quote #:												
Sampler Name: Hilda Villa		Circle One Event: Daily Weekly Monthly Quarterly												
Sample #		Sample ID	Collect Date	Collect Time	Matrix Code	Field Filtered	Integrity OK (Y/N)	Total # of containers	Example Volatiles by 8260	TPH 8015M	BTEX	CI		
1	SFFL1	12/30/2020			Soil		1		X	X	X			
2	SFFL2	12/30/2020			Soil		1		X	X	X			
3	SFFL3	12/31/2020			Soil		1		X	X	X			
4	SFFL4	12/31/2020			Soil		1		X	X	X			
5	SFWW1	12/30/2020			Soil		1		X	X	X			
6	SFWW2	12/30/2020			Soil		1		X	X	X			
7	SFWW3	12/31/2020			Soil		1		X	X	X			
8	SFWW4	12/31/2020			Soil		1		X	X	X			
9	WW12	12/30/2020			Soil		1		X	X	X			
0	EW15	12/30/2020			Soil		1		X	X	X			
Reg. Program / Clean-up Sid		STATE for Certs & Regs		QA/QC Level & Certification		EDDs		COC & Labels		Coolers Temp °C		Lab Use Only		
CTLS	TRRP	DW	NPDES	LPST	DryCh	FL	TX	GA	NC	SC	NJ	PA	OK	LA
Relinquished by		Affiliation		Date		Time		Received by		Date		Time		
1		Etech		1/3/20		08:35		Etech		1/3/20		8:55		
2		Etech		1/3/20		1:07		Etech		1/3/20		1:15		
3		Etech		1/3/20		1:07		Etech		1/3/20		1:15		
4		Etech		1/3/20		1:07		Etech		1/3/20		1:15		

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330  
STS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

C.O.C. Serial #

Execution of this document by client creates a legal and binding agreement between client and Xenoco for analytical and testing services provided by Xenoco to client under Xenoco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenoco remain the exclusive property of Xenoco until invoices for such data are paid in full.

Revision Date: Nov 12, 2009





Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200  
Odessa: 12600 West L20 East Odessa, TX 79765 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O.#: 10479089

Field billable Hrs: \_\_\_\_\_

Time: \_\_\_\_\_

TAT Work Days = D Need results by: \_\_\_\_\_

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other \_\_\_\_\_

## ANALYSES REQUESTED

## \*\* Preservative Type Codes

A. None E. HCL I. Ice  
B. HNO<sub>3</sub> F. MeOH J. MCAA  
C. H<sub>2</sub>SO<sub>4</sub> G. Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub> K. ZnAc&NaOH  
D. NaOH H. NaHSO<sub>4</sub> L. Aspc&AddNaOH  
O. \_\_\_\_\_

## ^ Matrix Type Codes

GW Ground Water S Soil/Sediment/Solid  
WW Waste Water W Wipe  
DW Drinking Water A Air  
SW Surface Water O Oil  
OW Ocean/Sea Water T Tissue  
PL Product-Liquid U Urine  
PS Product-Solid B Blood  
SL Sludge \_\_\_\_\_

## REMARKS

Company: Elech Environmental Phone: (575)396-2378  
Address: 3100 Plains Hwy. Fax: (575)396-1429  
City: Lovington State: NM Zip: 88260  
PM/Attn: Joel Lowry Email: [pm@elechenvironment.com](mailto:pm@elechenvironment.com)  
Project ID: Wrigley to Piper Pipeline PO#: PAA-C. Bryant  
Invoice To: Ralph Tijerina, Goodnight Midstream Quote #:

Sampler Name: Circle One Event: Daily Weekly Monthly Quarterly  
Hilda Villa Semi-Annual Annual N/A

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	Field Filtered	Integrity OK (Y/N)	Total # of containers
1	SFEW1	12/30/2020		Soil		1	
2	SFEW2	12/30/2020		Soil		1	
3	SFEW3	12/31/2020		Soil		1	
4	SFEW4	12/31/2020		Soil		1	
5							
6							
7							
8							
9							
0							

Reg Program / Clean-up Sid STATE for Certs & Regs  
C/LTS TRRP DW NPDES LPST DnCh FL TX GA NC SC NJ PA OK LA  
Other: AL NM Other: NE/LAC DOB-ELAP Other:

Relinquished by: \_\_\_\_\_  
Date: 1/3/20 Time: 08:35  
Signature: \_\_\_\_\_  
Date: 1/3/20 Time: 1:07  
Signature: \_\_\_\_\_

QA/QC Level & Certification  
1 2 3 4 CLP AFCEE QAPP  
NE/LAC DOB-ELAP Other: \_\_\_\_\_

EDDs  
ADAPT SEDD ERFIMS  
XLS Other: \_\_\_\_\_

COC & Labels  
Match Incomplete  
Absent Unclear  
1 2 3 0.8

Coolers Temp °C  
Date: 1/3/20 Time: 5:35  
Signature: \_\_\_\_\_  
Date: 1/3/20 Time: 10:15  
Signature: \_\_\_\_\_

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330  
STS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099  
C.O.C. Serial # \_\_\_\_\_

Lab Use Only YES NO N/A  
Non-Conformances found? \_\_\_\_\_  
Samples intact upon arrival? \_\_\_\_\_  
Received on Wet Ice? \_\_\_\_\_  
Labeled with proper preservation? \_\_\_\_\_  
Custody seals intact? \_\_\_\_\_  
VOCs rec'd w/o headspace? \_\_\_\_\_  
Proper containers used? \_\_\_\_\_  
pH verified-acceptable, excl VOCs? \_\_\_\_\_  
Received on time to meet HTS? \_\_\_\_\_

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.  
Revision Date: Nov 12, 2009

## Inter-Office Shipment

IOS Number : **55759**

Date/Time: 01.09.2020

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Lubbock**

Air Bill No.: 777441642390

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
647939-001	S	SFFL1	12.30.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.13.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-002	S	SFFL2	12.30.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.13.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-003	S	SFFL3	12.31.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.14.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-004	S	SFFL4	12.31.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.14.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-005	S	SFWW1	12.30.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.13.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-006	S	SFWW2	12.30.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.13.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-007	S	SFWW3	12.31.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.14.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-008	S	SFWW4	12.31.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.14.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-009	S	WW12	12.30.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.13.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-010	S	EW15	12.30.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.13.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-011	S	SFEW1	12.30.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.13.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-012	S	SFEW2	12.30.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.13.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-013	S	SFEW3	12.31.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.14.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	
647939-014	S	SFE4	12.31.2019 00:00	SW8021B	BTEX by EPA 8021B	01.10.2020	01.14.2020 00:00	JKR	BR4FBZ BZ BZME EBZ	

## Inter Office Shipment or Sample Comments:

Relinquished By:



Brianna Teel

Date Relinquished: 01.09.2020

Received By:



Ashley Derstine

Date Received: 01.10.2020

Cooler Temperature: 4.4



## Inter Office Report- Sample Receipt Checklist

Sent To: Lubbock

IOS #: 55759

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Brianna Teel

Date Sent: 01.09.2020 04.10 PM

Received By: Ashley Derstine

Date Received: 01.10.2020 10.00 AM

## Sample Receipt Checklist

## Comments

#1 *Temperature of cooler(s)?	4.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 *Custody Seals Signed and dated for Containers/coolers	N/A
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

## Nonconformance Documentation

Contact: \_\_\_\_\_ Contacted by : \_\_\_\_\_ Date: \_\_\_\_\_

Checklist reviewed by:

Ashley Derstine

Date: 01.10.2020



Client: Etech Environmental &amp; Safety Solution, I

Date/ Time Received: 01/06/2020 10:15:00 AM

Work Order #: 647939

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01/06/2020

Checklist reviewed by:

Jessica Kramer

Date: 01/08/2020

# **Analytical Report 647940**

**for**

## **Etech Environmental & Safety Solution, Inc**

**Project Manager: Lance Crenshaw**  
**Wrigley to Piper Pipeline**

**08-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)





08-JAN-20

Project Manager: **Lance Crenshaw**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **647940**  
**Wrigley to Piper Pipeline**  
Project Address:

**Lance Crenshaw:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 647940. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 647940 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

---

**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



**Sample Cross Reference 647940****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley to Piper Pipeline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SFFL5	S	01-02-20 00:00		647940-001
SFFL6	S	01-02-20 00:00		647940-002
SFEWB5	S	01-02-20 00:00		647940-003
SFEW6	S	01-02-20 00:00		647940-004
SFWWB5	S	01-02-20 00:00		647940-005
SFWW6	S	01-02-20 00:00		647940-006

**CASE NARRATIVE****Client Name: Etech Environmental & Safety Solution, Inc****Project Name: Wrigley to Piper Pipeline**

Project ID:

Work Order Number(s): 647940

Report Date: 08-JAN-20

Date Received: 01/06/2020

---

**Sample receipt non conformances and comments:**None

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3112463 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3112587 TPH By SW8015 Mod

Lab Sample ID 647940-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Gasoline Range Hydrocarbons (GRO) recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647940-001, -002, -003, -004, -005, -006.

The Laboratory Control Sample for Gasoline Range Hydrocarbons (GRO) is within laboratory Control Limits, therefore the data was accepted.

Gasoline Range Hydrocarbons (GRO) Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.

Samples in the analytical batch are: 647940-001, -002, -003, -004, -005, -006



# Certificate of Analytical Results

647940

## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: **SFFL5**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647940-001

Date Collected: 01.02.20 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2060	25.0	4.29	mg/kg	01.06.20 23:54		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.07.20 11:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 11:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 11:08	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.07.20 11:08	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112463

Date Prep: 01.06.20 13.00

Prep seq: 7693733

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	01.06.20 23:10	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	01.06.20 23:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	01.06.20 23:10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	01.06.20 23:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.06.20 23:10	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.06.20 23:10	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.06.20 23:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	113	70 - 130	%		
4-Bromofluorobenzene	99	70 - 130	%		



# Certificate of Analytical Results

647940



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: **SFFL6**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647940-002

Date Collected: 01.02.20 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	250	5.03	0.864	mg/kg	01.07.20 00:01		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	65.9	50.0	15.0	mg/kg	01.07.20 12:05		1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 12:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 12:05	U	1
Total TPH	PHC635	65.9		15.0	mg/kg	01.07.20 12:05		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112463

Date Prep: 01.06.20 13.00

Prep seq: 7693733

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	01.06.20 23:31	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	01.06.20 23:31	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	01.06.20 23:31	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	01.06.20 23:31	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	01.06.20 23:31	U	1
Total Xylenes	1330-20-7	<0.00202		0.000347	mg/kg	01.06.20 23:31	U	
Total BTEX		<0.00202		0.000347	mg/kg	01.06.20 23:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	95	70 - 130	%		



## Certificate of Analytical Results

647940



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFEWB5

Matrix: Soil

Sample Depth:

Lab Sample Id: 647940-003

Date Collected: 01.02.20 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.03	5.03	0.864	mg/kg	01.07.20 00:08	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	65.8	49.9	15.0	mg/kg	01.07.20 12:24		1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.07.20 12:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.07.20 12:24	U	1
Total TPH	PHC635	65.8		15.0	mg/kg	01.07.20 12:24		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112463

Date Prep: 01.06.20 13.00

Prep seq: 7693733

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	01.07.20 01:10	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	01.07.20 01:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	01.07.20 01:10	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	01.07.20 01:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.07.20 01:10	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.07.20 01:10	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.07.20 01:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	70 - 130	%		
4-Bromofluorobenzene	91	70 - 130	%		



# Certificate of Analytical Results

647940



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFEW6

Matrix: Soil

Sample Depth:

Lab Sample Id: 647940-004

Date Collected: 01.02.20 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<4.96	4.96	0.852	mg/kg	01.07.20 00:14	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.07.20 12:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 12:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 12:43	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.07.20 12:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112463

Date Prep: 01.06.20 13.00

Prep seq: 7693733

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000382	mg/kg	01.07.20 01:30	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000452	mg/kg	01.07.20 01:30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000560	mg/kg	01.07.20 01:30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	0.00101	mg/kg	01.07.20 01:30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000342	mg/kg	01.07.20 01:30	U	1
Total Xylenes	1330-20-7	<0.00198		0.000342	mg/kg	01.07.20 01:30	U	
Total BTEX		<0.00198		0.000342	mg/kg	01.07.20 01:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	90	70 - 130	%		





# Certificate of Analytical Results

## 647940



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFWWB5**

Matrix: Soil

Sample Depth:

Lab Sample Id: 647940-005

Date Collected: 01.02.20 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<4.98	4.98	0.855	mg/kg	01.07.20 00:21	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	01.07.20 13:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	01.07.20 13:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	01.07.20 13:02	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	01.07.20 13:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112463

Date Prep: 01.06.20 13.00

Prep seq: 7693733

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000382	mg/kg	01.07.20 01:50	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000452	mg/kg	01.07.20 01:50	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000560	mg/kg	01.07.20 01:50	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	0.00101	mg/kg	01.07.20 01:50	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000342	mg/kg	01.07.20 01:50	U	1
Total Xylenes	1330-20-7	<0.00198		0.000342	mg/kg	01.07.20 01:50	U	
Total BTEX		<0.00198		0.000342	mg/kg	01.07.20 01:50	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	101	70 - 130	%		



# Certificate of Analytical Results

647940



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFWW6

Matrix: Soil

Sample Depth:

Lab Sample Id: 647940-006

Date Collected: 01.02.20 00.00

Date Received: 01.06.20 10.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112472

Date Prep: 01.06.20 14.40

Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.04	5.04	0.865	mg/kg	01.07.20 00:27	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.07.20 13:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.07.20 13:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.07.20 13:22	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.07.20 13:22	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112463

Date Prep: 01.06.20 13.00

Prep seq: 7693733

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	01.07.20 02:11	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	01.07.20 02:11	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	01.07.20 02:11	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	01.07.20 02:11	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	01.07.20 02:11	U	1
Total Xylenes	1330-20-7	<0.00202		0.000347	mg/kg	01.07.20 02:11	U	
Total BTEX		<0.00202		0.000347	mg/kg	01.07.20 02:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	70 - 130	%		
4-Bromofluorobenzene	100	70 - 130	%		



# Certificate of Analytical Results

## 647940



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **7693733-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693733-1-BLK Date Collected: Date Received:  
 Analytical Method: BTEX by EPA 8021B Prep Method: 5030B  
 Analyst: KTL % Moist: Tech: KTL  
 Seq Number: 3112463 Date Prep: 01.06.20 09.30  
 Prep seq: 7693733

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	01.06.20 20:06	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	01.06.20 20:06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	01.06.20 20:06	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	01.06.20 20:06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.06.20 20:06	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	94	70 - 130	%		

Sample Id: **7693776-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7693776-1-BLK Date Collected: Date Received:  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Analyst: CHE % Moist: Tech: CHE  
 Seq Number: 3112472 Date Prep: 01.06.20 14.40  
 Prep seq: 7693776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	01.06.20 22:35	U	1



# Certificate of Analytical Results

## 647940



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **7693864-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7693864-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.07.20 10:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 10:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 10:11	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	86	70 - 135	%		
o-Terphenyl	89	70 - 135	%		



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



# Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper Pipeline

Work Orders : 647940,

Project ID:

Lab Batch #: 3112463

Sample: 7693733-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/06/20 17:56

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	70-130	
4-Bromofluorobenzene	0.0306	0.0300	102	70-130	

Lab Batch #: 3112463

Sample: 7693733-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/06/20 18:17

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0299	0.0300	100	70-130	

Lab Batch #: 3112463

Sample: 647843-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/20 18:37

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0321	0.0300	107	70-130	

Lab Batch #: 3112463

Sample: 647843-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/20 18:58

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0342	0.0300	114	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3112463

Sample: 7693733-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/06/20 20:06

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	70-130	
4-Bromofluorobenzene	0.0281	0.0300	94	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.





## Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper Pipeline

Work Orders : 647940,

Project ID:

Lab Batch #: 3112587

Sample: 7693864-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/07/20 10:11

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.2	100	86	70-135	
o-Terphenyl	44.4	50.0	89	70-135	

Lab Batch #: 3112587

Sample: 7693864-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/07/20 10:30

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	51.3	50.0	103	70-135	

Lab Batch #: 3112587

Sample: 7693864-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/07/20 10:49

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	52.9	50.0	106	70-135	

Lab Batch #: 3112587

Sample: 647940-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/20 11:27

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.7	117	70-135	
o-Terphenyl	63.6	49.9	127	70-135	

Lab Batch #: 3112587

Sample: 647940-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/20 11:46

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.6	112	70-135	
o-Terphenyl	57.1	49.8	115	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



# BS / BSD Recoveries



**Project Name: Wrigley to Piper Pipeline**

**Work Order #: 647940**

**Project ID:**

**Analyst: KTL**

**Date Prepared: 01/06/2020**

**Date Analyzed: 01/06/2020**

**Lab Batch ID: 3112463**

**Sample: 7693733-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>BTEX by EPA 8021B</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Benzene	<0.00200	0.100	0.114	114	0.100	0.112	112	2	70-130	35	
Toluene	<0.00200	0.100	0.110	110	0.100	0.107	107	3	70-130	35	
Ethylbenzene	<0.00200	0.100	0.114	114	0.100	0.109	109	4	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.234	117	0.200	0.224	112	4	70-130	35	
o-Xylene	<0.00200	0.100	0.115	115	0.100	0.110	110	4	70-130	35	

**Analyst: CHE**

**Date Prepared: 01/06/2020**

**Date Analyzed: 01/06/2020**

**Lab Batch ID: 3112472**

**Sample: 7693776-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>Chloride by EPA 300</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Chloride	<0.858	250	266	106	250	265	106	0	90-110	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



# BS / BSD Recoveries



**Project Name: Wrigley to Piper Pipeline**

**Work Order #:** 647940

**Project ID:**

**Analyst:** ARM

**Date Prepared:** 01/07/2020

**Date Analyzed:** 01/07/2020

**Lab Batch ID:** 3112587

**Sample:** 7693864-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	712	71	1000	854	85	18	70-135	20	
Diesel Range Organics (DRO)	15.0	1000	834	83	1000	750	75	11	70-135	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper Pipeline

Work Order #: 647940

Project ID:

Lab Batch ID: 3112463

QC- Sample ID: 647843-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/06/2020

Date Prepared: 01/06/2020

Analyst: KTL

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.100	0.0928	93	0.0992	0.0903	91	3	70-130	35	
Toluene	<0.00200	0.100	0.0870	87	0.0992	0.0816	82	6	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0859	86	0.0992	0.0793	80	8	70-130	35	
m,p-Xylenes	<0.00400	0.200	0.177	89	0.198	0.163	82	8	70-130	35	
o-Xylene	<0.00200	0.100	0.0880	88	0.0992	0.0807	81	9	70-130	35	

Lab Batch ID: 3112472

QC- Sample ID: 647939-010 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/06/2020

Date Prepared: 01/06/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	823	251	1080	102	251	1110	114	3	90-110	20	X

Lab Batch ID: 3112472

QC- Sample ID: 647940-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/07/2020

Date Prepared: 01/06/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.39	252	275	108	252	280	110	2	90-110	20	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper Pipeline

Work Order # : 647940

Project ID:

Lab Batch ID: 3112587

QC- Sample ID: 647940-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/07/2020

Date Prepared: 01/07/2020

Analyst: ARM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	857	86	996	686	69	22	70-135	20	XF
Diesel Range Organics (DRO)	31.2	997	741	71	996	804	78	8	70-135	20	

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
 Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.





Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800  
 Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. #:

Field billable Hrs.:

TAT Work Days = D Need results by: Time:

Company: Ettech Environmental  
 Address: 3100 Plains Hwy.  
 City: Lovington  
 PM/Attn: Lance Crenshaw  
 Project ID: Wrigley to Piper Pipeline  
 Invoice To: Ralph Tijerina, Goodnight Midstream

Phone: (575)396-2378  
 Fax: (575)396-1429  
 State: NM Zip: 88260  
 Email: dm@ettechenv.com  
 PO#: PAA-C. Bryant  
 Quote #:

Container Type Codes	
VA Vial Amber	ES Encore Sampler
VC Vial Clear	TS TerraCore Sampler
VP Vial Pre-preserved	AC Air Canister
GA Glass Amber	TB Tedlar Bag
GC Glass Clear	ZB Zip Lock Bag
PA Plastic Amber	PC Plastic Clear
Other:	

Circle One Event: Daily Weekly Monthly Quarterly  
 Semi-Annual Annual N/A

Example Volatiles by 8260  
 TPH 8015M  
 BTEX  
 C

Preservative Type Codes	
A. None	E. HCL
B. HNO <sub>3</sub>	F. MeOH
C. H <sub>2</sub> SO <sub>4</sub>	G. Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub>
D. NaOH	H. NaHSO <sub>4</sub>
I. Ice	J. MCAA
K. ZnAc <sub>2</sub> /NaOH	L. Ascorbic Acid/NaOH
M. None	N. None

Sample #

Collect Date Collect Time Matrix Code Field Filtered Integrity OK (Y/N) Total # of containers

Matrix Type Codes	
GW Ground Water	S Soil/Sediment/Solid
WW Waste Water	W Wipe
DW Drinking Water	A Air
SW Surface Water	O Oil
OW Ocean/Sea Water	T Tissue
PL Product-Liquid	U Urine
PS Product-Solid	B Blood
SL Sludge	

Reg. Program / Clean-up Std

STATE for Certs & Regs

Lab Use Only

Reg. Program / Clean-up Std

CA/QC Level & Certification

COOLERS Temp °C

Reg. Program / Clean-up Std

EDDS

COOLERS Temp °C

Reg. Program / Clean-up Std

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ORIGIN ID: H0BA (5/5) 392-7550  
\*\*  
MAIL SERVICES ETC, LLC  
4008 N GRIMES

HOBBS, NM 88240  
UNITED STATES US

SHIP DATE: 03JAN20  
ACTWGT: 27.00 LB MAN  
CAD: 0909328/CAFE3211  
DIMS: 19x16x14 IN

BILL RECIPIENT

TO XENCO LABORATORIES HOLD FOR PICK UP  
FEDEX EXPRESS SHIP CENTER  
FEDEX EXPRESS SHIP CENTER  
3600 COUNTY ROAD 1276 SOUTH

MIDLAND TX 79711

(432) 563-1800

REF:

DEPT:

INV:

PO:



FedEx  
Express



J181118868501uv

TRK#  
0201

4705 2522 5585

SATURDAY HOLD  
PRIORITY OVERNIGHT  
HLD

41 MAFA

MAFA  
TX-US LBB



WT # 155145-454 RTZ EXP 0720

151966 10/04 MWI

Delivery

# **Analytical Report 648064**

**for**  
**Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**  
**Wrigley to Piper Pipeline**

**14-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



14-JAN-20

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **648064**  
**Wrigley to Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 648064. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 648064 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 648064****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley to Piper Pipeline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SFWW7	S	01-03-20 08:00		648064-001
SFWW8	S	01-03-20 09:35		648064-002
SFWW9	S	01-03-20 12:35		648064-003
SFEW7	S	01-03-20 08:05		648064-004
SFEW8A	S	01-03-20 11:00		648064-005
SFEW9A	S	01-03-20 13:15		648064-006
SFEW10	S	01-03-20 14:45		648064-007
SFFS7	S	01-03-20 08:10		648064-008
SFFS8	S	01-03-20 09:40		648064-009
SFFS9	S	01-03-20 12:40		648064-010
SFFS10	S	01-03-20 14:55		648064-011



## CASE NARRATIVE

**Client Name:** *Etech Environmental & Safety Solution, Inc*

**Project Name:** *Wrigley to Piper Pipeline*

Project ID:

Work Order Number(s): 648064

Report Date: 14-JAN-20

Date Received: 01/07/2020

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**Sample receipt non conformances and comments:**

None

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3112950 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



# Certificate of Analytical Results

648064



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFWW7

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-001

Date Collected: 01.03.20 08.00

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	172	4.98	0.855	mg/kg	01.07.20 16:41		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.07.20 13:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 13:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 13:41	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.07.20 13:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.10.20 12:54	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	01.10.20 12:54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	01.10.20 12:54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.10.20 12:54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	01.10.20 12:54	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	01.10.20 12:54	U	
Total BTEX		<0.00199		0.000343	mg/kg	01.10.20 12:54	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	89	70 - 130	%		





# Certificate of Analytical Results

## 648064



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFWW8**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-002

Date Collected: 01.03.20 09.35

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	20.4	4.97	0.853	mg/kg	01.07.20 17:01		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.07.20 14:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.07.20 14:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.07.20 14:00	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.07.20 14:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000386	mg/kg	01.10.20 14:55	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000457	mg/kg	01.10.20 14:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000566	mg/kg	01.10.20 14:55	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	0.00102	mg/kg	01.10.20 14:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000345	mg/kg	01.10.20 14:55	U	1
Total Xylenes	1330-20-7	<0.00200		0.000345	mg/kg	01.10.20 14:55	U	
Total BTEX		<0.00200		0.000345	mg/kg	01.10.20 14:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	103	70 - 130	%		
4-Bromofluorobenzene	84	70 - 130	%		



# Certificate of Analytical Results

648064



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFWW9

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-003

Date Collected: 01.03.20 12.35

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	35.5	5.03	0.864	mg/kg	01.07.20 17:07		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.07.20 14:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 14:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 14:19	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.07.20 14:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.10.20 15:15	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000453	mg/kg	01.10.20 15:15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000561	mg/kg	01.10.20 15:15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.10.20 15:15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000342	mg/kg	01.10.20 15:15	U	1
Total Xylenes	1330-20-7	<0.00199		0.000342	mg/kg	01.10.20 15:15	U	
Total BTEX		<0.00199		0.000342	mg/kg	01.10.20 15:15	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	105	70 - 130	%		
4-Bromofluorobenzene	87	70 - 130	%		



# Certificate of Analytical Results

## 648064



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFEW7**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-004

Date Collected: 01.03.20 08.05

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	42.5	4.99	0.857	mg/kg	01.07.20 17:14		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.07.20 14:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.07.20 14:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.07.20 14:38	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.07.20 14:38	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00244	0.00244	0.000470	mg/kg	01.10.20 15:35	U	1
Toluene	108-88-3	<0.00244	0.00244	0.000556	mg/kg	01.10.20 15:35	U	1
Ethylbenzene	100-41-4	<0.00244	0.00244	0.000689	mg/kg	01.10.20 15:35	U	1
m,p-Xylenes	179601-23-1	<0.00488	0.00488	0.00124	mg/kg	01.10.20 15:35	U	1
o-Xylene	95-47-6	<0.00244	0.00244	0.000420	mg/kg	01.10.20 15:35	U	1
Total Xylenes	1330-20-7	<0.00244		0.000420	mg/kg	01.10.20 15:35	U	
Total BTEX		<0.00244		0.000420	mg/kg	01.10.20 15:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	85	70 - 130	%		



## Certificate of Analytical Results

648064

## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFEW8A

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-005

Date Collected: 01.03.20 11.00

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	10.1	4.96	0.852	mg/kg	01.07.20 17:21		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.07.20 15:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.07.20 15:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.07.20 15:17	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.07.20 15:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.10.20 15:55	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	01.10.20 15:55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	01.10.20 15:55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.10.20 15:55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	01.10.20 15:55	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	01.10.20 15:55	U	
Total BTEX		<0.00199		0.000343	mg/kg	01.10.20 15:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	92	70 - 130	%		



# Certificate of Analytical Results

## 648064



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFEW9A**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-006

Date Collected: 01.03.20 13.15

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	01.07.20 17:41	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.07.20 15:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 15:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 15:36	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.07.20 15:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	01.10.20 17:14	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	01.10.20 17:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	01.10.20 17:14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	01.10.20 17:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.10.20 17:14	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.10.20 17:14	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.10.20 17:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	84	70 - 130	%		



# Certificate of Analytical Results

648064



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: SFEW10

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-007

Date Collected: 01.03.20 14.45

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	37.3	5.02	0.862	mg/kg	01.07.20 17:47		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.07.20 15:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 15:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 15:55	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.07.20 15:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	01.10.20 17:34	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	01.10.20 17:34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	01.10.20 17:34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	01.10.20 17:34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	01.10.20 17:34	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	01.10.20 17:34	U	
Total BTEX		<0.00201		0.000346	mg/kg	01.10.20 17:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	80	70 - 130	%		





# Certificate of Analytical Results

648064



## Etech Environmental & Safety Solution, Inc, Midland, TX

Wrigley to Piper Pipeline

Sample Id: **SFFS7**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-008

Date Collected: 01.03.20 08.10

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1170	5.00	0.858	mg/kg	01.07.20 17:54		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.07.20 16:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.07.20 16:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.07.20 16:14	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.07.20 16:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	95	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	01.10.20 17:54	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	01.10.20 17:54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	01.10.20 17:54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	01.10.20 17:54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.10.20 17:54	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.10.20 17:54	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.10.20 17:54	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	70 - 130	%		
4-Bromofluorobenzene	78	70 - 130	%		



# Certificate of Analytical Results

## 648064



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFFS8**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-009

Date Collected: 01.03.20 09.40

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1930	24.9	4.27	mg/kg	01.07.20 18:01		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	56.3	50.0	15.0	mg/kg	01.07.20 16:33		1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 16:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 16:33	U	1
Total TPH	PHC635	56.3		15.0	mg/kg	01.07.20 16:33		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	01.10.20 18:14	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	01.10.20 18:14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	01.10.20 18:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	01.10.20 18:14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	01.10.20 18:14	U	1
Total Xylenes	1330-20-7	<0.00202		0.000347	mg/kg	01.10.20 18:14	U	
Total BTEX		<0.00202		0.000347	mg/kg	01.10.20 18:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	70 - 130	%		
4-Bromofluorobenzene	84	70 - 130	%		



# Certificate of Analytical Results

## 648064



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFFS9**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-010

Date Collected: 01.03.20 12.40

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	3750	25.0	4.29	mg/kg	01.07.20 18:07		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.07.20 16:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 16:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 16:52	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.07.20 16:52	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000381	mg/kg	01.10.20 18:35	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000451	mg/kg	01.10.20 18:35	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000559	mg/kg	01.10.20 18:35	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	0.00100	mg/kg	01.10.20 18:35	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000341	mg/kg	01.10.20 18:35	U	1
Total Xylenes	1330-20-7	<0.00198		0.000341	mg/kg	01.10.20 18:35	U	
Total BTEX		<0.00198		0.000341	mg/kg	01.10.20 18:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	87	70 - 130	%		



# Certificate of Analytical Results

## 648064



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFFS10**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648064-011

Date Collected: 01.03.20 14.55

Date Received: 01.07.20 10.46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2910	25.2	4.32	mg/kg	01.07.20 18:34		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.07.20 17:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.07.20 17:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.07.20 17:11	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.07.20 17:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	91	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000386	mg/kg	01.10.20 18:55	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000457	mg/kg	01.10.20 18:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000566	mg/kg	01.10.20 18:55	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	0.00102	mg/kg	01.10.20 18:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000345	mg/kg	01.10.20 18:55	U	1
Total Xylenes	1330-20-7	<0.00200		0.000345	mg/kg	01.10.20 18:55	U	
Total BTEX		<0.00200		0.000345	mg/kg	01.10.20 18:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	70 - 130	%		
4-Bromofluorobenzene	85	70 - 130	%		



# Certificate of Analytical Results

## 648064



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **7693829-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7693829-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112559

Date Prep: 01.07.20 12.50

Prep seq: 7693829

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	01.07.20 16:21	U	1

Sample Id: **7693864-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7693864-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3112587

Date Prep: 01.07.20 09.00

Prep seq: 7693864

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.07.20 10:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.07.20 10:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.07.20 10:11	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	86	70 - 135	%		
o-Terphenyl	89	70 - 135	%		



# Certificate of Analytical Results

## 648064



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **7694088-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7694088-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3112950

Date Prep: 01.10.20 10.15

Prep seq: 7694088

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	01.10.20 12:34	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	01.10.20 12:34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	01.10.20 12:34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	01.10.20 12:34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.10.20 12:34	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	82	70 - 130	%		





## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



# Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper Pipeline

Work Orders : 648064,

Project ID:

Lab Batch #: 3112950

Sample: 7694088-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/10/20 10:35

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	70-130	
4-Bromofluorobenzene	0.0272	0.0300	91	70-130	

Lab Batch #: 3112950

Sample: 7694088-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/10/20 10:55

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3112950

Sample: 648064-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/10/20 11:15

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0308	0.0300	103	70-130	

Lab Batch #: 3112950

Sample: 648064-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/10/20 11:35

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

Lab Batch #: 3112950

Sample: 7694088-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/10/20 12:34

## SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0247	0.0300	82	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



# Form 2 - Surrogate Recoveries

Project Name: Wrigley to Piper Pipeline

Work Orders : 648064,

Project ID:

Lab Batch #: 3112587

Sample: 7693864-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/07/20 10:11

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.2	100	86	70-135	
o-Terphenyl	44.4	50.0	89	70-135	

Lab Batch #: 3112587

Sample: 7693864-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/07/20 10:30

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	51.3	50.0	103	70-135	

Lab Batch #: 3112587

Sample: 7693864-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/07/20 10:49

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	52.9	50.0	106	70-135	

Lab Batch #: 3112587

Sample: 647940-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/20 11:27

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.7	117	70-135	
o-Terphenyl	63.6	49.9	127	70-135	

Lab Batch #: 3112587

Sample: 647940-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/20 11:46

## SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.6	112	70-135	
o-Terphenyl	57.1	49.8	115	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## BS / BSD Recoveries



Project Name: Wrigley to Piper Pipeline

Work Order #: 648064

Project ID:

Analyst: KTL

Date Prepared: 01/10/2020

Date Analyzed: 01/10/2020

Lab Batch ID: 3112950

Sample: 7694088-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000385	0.100	0.120	120	0.100	0.117	117	3	70-130	35	
Toluene	<0.000456	0.100	0.109	109	0.100	0.107	107	2	70-130	35	
Ethylbenzene	<0.000565	0.100	0.102	102	0.100	0.102	102	0	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.200	100	0.200	0.198	99	1	70-130	35	
o-Xylene	<0.000344	0.100	0.0988	99	0.100	0.0982	98	1	70-130	35	

Analyst: CHE

Date Prepared: 01/07/2020

Date Analyzed: 01/07/2020

Lab Batch ID: 3112559

Sample: 7693829-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	245	98	250	241	96	2	90-110	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



# BS / BSD Recoveries



**Project Name: Wrigley to Piper Pipeline**

**Work Order #: 648064**

**Project ID:**

**Analyst: ARM**

**Date Prepared: 01/07/2020**

**Date Analyzed: 01/07/2020**

**Lab Batch ID: 3112587**

**Sample: 7693864-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	712	71	1000	854	85	18	70-135	20	
Diesel Range Organics (DRO)	15.0	1000	834	83	1000	750	75	11	70-135	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper Pipeline

Work Order #: 648064

Project ID:

Lab Batch ID: 3112950

QC- Sample ID: 648064-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/10/2020

Date Prepared: 01/10/2020

Analyst: KTL

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000383	0.0996	0.105	105	0.0992	0.105	106	0	70-130	35	
Toluene	0.000618	0.0996	0.0999	100	0.0992	0.102	102	2	70-130	35	
Ethylbenzene	<0.000563	0.0996	0.0945	95	0.0992	0.0972	98	3	70-130	35	
m,p-Xylenes	<0.00101	0.199	0.187	94	0.198	0.192	97	3	70-130	35	
o-Xylene	0.000369	0.0996	0.0941	94	0.0992	0.0958	96	2	70-130	35	

Lab Batch ID: 3112559

QC- Sample ID: 648064-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/07/2020

Date Prepared: 01/07/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	172	299	476	102	299	465	98	2	90-110	20	

Lab Batch ID: 3112559

QC- Sample ID: 648066-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/07/2020

Date Prepared: 01/07/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	456	300	757	100	300	750	98	1	90-110	20	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.





## Form 3 - MS / MSD Recoveries



Project Name: Wrigley to Piper Pipeline

Work Order # : 648064

Project ID:

Lab Batch ID: 3112587

QC- Sample ID: 647940-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/07/2020

Date Prepared: 01/07/2020

Analyst: ARM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	857	86	996	686	69	22	70-135	20	XF
Diesel Range Organics (DRO)	31.2	997	741	71	996	804	78	8	70-135	20	

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
 Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.







Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200  
Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 2 of 2

LAB W.O. #:

Field billable Hrs:

Need results by: \_\_\_\_\_ Time: \_\_\_\_\_

Company: Etech Environmental Phone: (575)396-2378  
Address: 3100 Plains Hwy. Fax: (575)396-1429  
City: Lovington State: NM Zip: 88260

PM/Attn: Joel Lowry Email: [pm@etechenv.com](mailto:pm@etechenv.com)  
Project ID: Wrigley to Piper Pipeline PO#: PAA-C. Bryant

Invoice To: Ralph Tijerina, Goodnight Midstream Quote #:

Sampler Name: Matthew Grieco Circle One Event: Daily Weekly Monthly Quarterly

Sample # Sample ID Collect Date Collect Time Matrix Code Field Filtered Integrity OK (Y/N) Total # of containers

1 SFFS10 1/3/2020 14:55 Soil 1

2

3

4

5

6

7

8

9

0

Reg. Program / Clean-up Std STATE for Certs & Regs

Other: TRRP DW NPDES LPST DryChn FL TX GA NC SC NJ PA OK LA

Relinquished by Affiliation Date Time

1 1/16/20 15:27

2 1/16/20 21:22

3

4

Example Volatiles by 8260 TPH 8015M BTEX C

Matrix Type Codes  
GW Ground Water S Soil/Sediment/Solid  
WW Waste Water W Wipe  
DW Drinking Water A Air  
SW Surface Water O Oil  
OW Ocean/Sea Water T Tissue  
PL Product-Liquid U Urine  
PS Product-Solid B Blood  
SL Sludge

REMARKS

Lab Use Only YES NO N/A

Non-Conformances found?

Samples intact upon arrival?

Received on W/L 1a?

Labelled with proper preservation?

Received within holding time?

Custom seals intact?

VOCs rec'd w/o headspace?

Proper containers used?

pH verified-acceptable, excl VOCs?

Received on time to meet HHS?

C.O.C. Serial #

1-5-2020 3:28pm

171000 10410

Xenoco

610-955-5649 South Carolina 803-543-8099

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Revision Date: Nov 12, 2009

41 MAFB

TX-US LBB

MAFA

HLD

PRIORITY OVERNIGHT

TUE - 07 JAN HOLD

4705 2522 5839

TRK# 0201

Pen # 155140-434 RTZ EXP 07/20

16111806501uv

FedEx Express

551CZ/DF82/104C

DEPT:

REF:

INV: (432) 563-1800

MIDLAND TX 79711

3600 COUNTY ROAD 1276 SOUTH

FEDEx EXPRESS SHIP CENTER

FEDEx EXPRESS SHIP CENTER

XENCO LABORATORIES HOLD FOR PICK UP

PO: UNITED STATES US

HOBBS, NM 88240

MAIL SERVICES ETC, LLC

4008 N GRIMES

ORIGIN ID: HOBBS (575) 392-7880

SHIP DATE: 06JAN20

ACTWGT: 24.00 LB MAN

CAD: 0909328/CAFE3211

DIMS: 19x16x13 IN

BILL RECIPIENT



Client: Etech Environmental &amp; Safety Solution, I

Date/ Time Received: 01/07/2020 10:46:00 AM

Work Order #: 648064

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

#1 *Temperature of cooler(s)?	3.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01/09/2020

Checklist reviewed by:

Jessica Kramer

Date: 01/09/2020

# **Analytical Report 648467**

**for**  
**Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**  
**Wrigley Piper Pipeline**

**17-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)





17-JAN-20

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **648467**  
**Wrigley Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 648467. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 648467 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



## Sample Cross Reference 648467

Etech Environmental &amp; Safety Solution, Inc, Midland, TX

Wrigley Piper Pipeline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SFWW11	S	01-06-20 07:40		648467-001
SFWW12	S	01-06-20 11:33		648467-002
SFWW13	S	01-06-20 12:54		648467-003
SFWW14	S	01-07-20 08:34		648467-004
SFWW15	S	01-07-20 09:55		648467-005
SFWW16	S	01-06-20 11:46		648467-006
SFWW17	S	01-06-20 13:37		648467-007
SFEW11A	S	01-06-20 09:53		648467-008
SFEW12	S	01-06-20 11:36		648467-009
SFEW13C	S	01-06-20 14:14		648467-010
SFEW14	S	01-07-20 08:35		648467-011
SFEW15B	S	01-07-20 10:30		648467-012
SFEW16	S	01-07-20 11:48		648467-013
SFEW17	S	01-07-20 13:39		648467-014
SFFS11	S	01-06-20 09:10		648467-015
SFFS12	S	01-06-20 11:31		648467-016
SFF13B	S	01-06-20 13:47		648467-017
SFFS14	S	01-06-20 08:44		648467-018
SFFS15	S	01-07-20 09:58		648467-019
SFFS16	S	01-07-20 11:49		648467-020
SFFS17	S	01-07-20 13:41		648467-021

**CASE NARRATIVE****Client Name: Etech Environmental & Safety Solution, Inc****Project Name: Wrigley Piper Pipeline**

Project ID:

Work Order Number(s): 648467

Report Date: 17-JAN-20

Date Received: 01/09/2020

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**Sample receipt non conformances and comments:**None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3113509 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3113660 BTEX by EPA 8021B

Lab Sample ID 648467-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 648467-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



## Certificate of Analytical Results

648467



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

## Wrigley Piper Pipeline

Sample Id: SFWW11

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-001

Date Collected: 01.06.20 07.40

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<4.95	4.95	0.850	mg/kg	01.10.20 18:20	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 13:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 13:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 13:02	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.14.20 13:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	85	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000382	mg/kg	01.17.20 08:01	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000452	mg/kg	01.17.20 08:01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000560	mg/kg	01.17.20 08:01	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	0.00101	mg/kg	01.17.20 08:01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000342	mg/kg	01.17.20 08:01	U	1
Total Xylenes	1330-20-7	<0.00198		0.000342	mg/kg	01.17.20 08:01	U	
Total BTEX		<0.00198		0.000342	mg/kg	01.17.20 08:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	70 - 130	%		
4-Bromofluorobenzene	82	70 - 130	%		



## Certificate of Analytical Results

648467



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

## Wrigley Piper Pipeline

Sample Id: SFWW12

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-002

Date Collected: 01.06.20 11.33

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	01.10.20 19:39	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 13:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 13:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 13:59	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.14.20 13:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	82	70 - 135	%		
o-Terphenyl	84	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	01.17.20 08:21	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	01.17.20 08:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	01.17.20 08:21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	01.17.20 08:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.17.20 08:21	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.17.20 08:21	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.17.20 08:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	83	70 - 130	%		



# Certificate of Analytical Results

## 648467



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley Piper Pipeline

Sample Id: **SFWW13**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-003

Date Collected: 01.06.20 12.54

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.05	5.05	0.867	mg/kg	01.10.20 19:45	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.14.20 14:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.14.20 14:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.14.20 14:17	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.14.20 14:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	85	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000382	mg/kg	01.17.20 08:41	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000452	mg/kg	01.17.20 08:41	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000560	mg/kg	01.17.20 08:41	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	0.00101	mg/kg	01.17.20 08:41	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000342	mg/kg	01.17.20 08:41	U	1
Total Xylenes	1330-20-7	<0.00198		0.000342	mg/kg	01.17.20 08:41	U	
Total BTEX		<0.00198		0.000342	mg/kg	01.17.20 08:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	70 - 130	%		
4-Bromofluorobenzene	76	70 - 130	%		





# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: SFWW14

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-004

Date Collected: 01.07.20 08.34

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	18.8	4.99	0.857	mg/kg	01.10.20 19:52		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.14.20 14:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.14.20 14:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.14.20 14:36	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.14.20 14:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	85	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.17.20 09:01	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	01.17.20 09:01	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	01.17.20 09:01	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.17.20 09:01	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	01.17.20 09:01	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	01.17.20 09:01	U	
Total BTEX		<0.00199		0.000343	mg/kg	01.17.20 09:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	110	70 - 130	%		
4-Bromofluorobenzene	78	70 - 130	%		



## Certificate of Analytical Results

648467



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

## Wrigley Piper Pipeline

Sample Id: SFWW15

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-005

Date Collected: 01.07.20 09.55

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	6.85	5.04	0.865	mg/kg	01.10.20 19:59		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	01.14.20 14:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	01.14.20 14:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	01.14.20 14:55	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	01.14.20 14:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	85	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.17.20 09:21	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	01.17.20 09:21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	01.17.20 09:21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.17.20 09:21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	01.17.20 09:21	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	01.17.20 09:21	U	
Total BTEX		<0.00199		0.000343	mg/kg	01.17.20 09:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	110	70 - 130	%		
4-Bromofluorobenzene	82	70 - 130	%		



# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: SFWW16

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-006

Date Collected: 01.06.20 11.46

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	36.6	5.00	0.858	mg/kg	01.10.20 20:19		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 15:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 15:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 15:14	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.14.20 15:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.17.20 09:41	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	01.17.20 09:41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	01.17.20 09:41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.17.20 09:41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	01.17.20 09:41	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	01.17.20 09:41	U	
Total BTEX		<0.00199		0.000343	mg/kg	01.17.20 09:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	70 - 130	%		
4-Bromofluorobenzene	80	70 - 130	%		



# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: SFWW17

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-007

Date Collected: 01.06.20 13.37

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	6.44	4.98	0.855	mg/kg	01.10.20 20:25		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 15:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 15:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 15:33	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.14.20 15:33	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	81	70 - 135	%		
o-Terphenyl	83	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	01.17.20 10:04	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	01.17.20 10:04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	01.17.20 10:04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	01.17.20 10:04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.17.20 10:04	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.17.20 10:04	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.17.20 10:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	84	70 - 130	%		



## Certificate of Analytical Results

648467



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

## Wrigley Piper Pipeline

Sample Id: SFEW11A

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-008

Date Collected: 01.06.20 09.53

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	6.46	5.00	0.858	mg/kg	01.10.20 20:45		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	01.14.20 15:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	01.14.20 15:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	01.14.20 15:51	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	01.14.20 15:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	81	70 - 135	%		
o-Terphenyl	81	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.17.20 10:24	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	01.17.20 10:24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	01.17.20 10:24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.17.20 10:24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	01.17.20 10:24	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	01.17.20 10:24	U	
Total BTEX		<0.00199		0.000343	mg/kg	01.17.20 10:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	80	70 - 130	%		



## Certificate of Analytical Results

648467



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

## Wrigley Piper Pipeline

Sample Id: SFEW12

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-009

Date Collected: 01.06.20 11.36

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	3190	25.2	4.32	mg/kg	01.10.20 20:52		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.15.20 10:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.15.20 10:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.15.20 10:41	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.15.20 10:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	86	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000381	mg/kg	01.17.20 10:45	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000451	mg/kg	01.17.20 10:45	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000559	mg/kg	01.17.20 10:45	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	0.00100	mg/kg	01.17.20 10:45	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000341	mg/kg	01.17.20 10:45	U	1
Total Xylenes	1330-20-7	<0.00198		0.000341	mg/kg	01.17.20 10:45	U	
Total BTEX		<0.00198		0.000341	mg/kg	01.17.20 10:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	83	70 - 130	%		





# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: SFEW13C

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-010

Date Collected: 01.06.20 14.14

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	10.9	5.05	0.867	mg/kg	01.10.20 20:59		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.14.20 16:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.14.20 16:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.14.20 16:29	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.14.20 16:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000386	mg/kg	01.17.20 11:05	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000457	mg/kg	01.17.20 11:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000566	mg/kg	01.17.20 11:05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	0.00102	mg/kg	01.17.20 11:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000345	mg/kg	01.17.20 11:05	U	1
Total Xylenes	1330-20-7	<0.00200		0.000345	mg/kg	01.17.20 11:05	U	
Total BTEX		<0.00200		0.000345	mg/kg	01.17.20 11:05	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	82	70 - 130	%		



# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: SFEW14

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-011

Date Collected: 01.07.20 08.35

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	3210	25.0	4.28	mg/kg	01.10.20 21:05		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.14.20 17:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.14.20 17:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.14.20 17:07	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.14.20 17:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	81	70 - 135	%		
o-Terphenyl	84	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	01.17.20 12:24	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	01.17.20 12:24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	01.17.20 12:24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	01.17.20 12:24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	01.17.20 12:24	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	01.17.20 12:24	U	
Total BTEX		<0.00201		0.000346	mg/kg	01.17.20 12:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	70 - 130	%		
4-Bromofluorobenzene	74	70 - 130	%		



## Certificate of Analytical Results

648467



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

## Wrigley Piper Pipeline

Sample Id: SFEW15B

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-012

Date Collected: 01.07.20 10.30

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.01	5.01	0.860	mg/kg	01.10.20 21:12	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 17:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 17:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 17:26	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.14.20 17:26	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	96	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.17.20 12:44	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000453	mg/kg	01.17.20 12:44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000561	mg/kg	01.17.20 12:44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.17.20 12:44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000342	mg/kg	01.17.20 12:44	U	1
Total Xylenes	1330-20-7	<0.00199		0.000342	mg/kg	01.17.20 12:44	U	
Total BTEX		<0.00199		0.000342	mg/kg	01.17.20 12:44	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	70 - 130	%		
4-Bromofluorobenzene	82	70 - 130	%		



# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: SFEW16

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-013

Date Collected: 01.07.20 11.48

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	12.1	4.98	0.855	mg/kg	01.10.20 21:19		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 17:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 17:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 17:45	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.14.20 17:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	85	70 - 135	%		
o-Terphenyl	87	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000381	mg/kg	01.17.20 13:04	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000451	mg/kg	01.17.20 13:04	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000559	mg/kg	01.17.20 13:04	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	0.00100	mg/kg	01.17.20 13:04	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000341	mg/kg	01.17.20 13:04	U	1
Total Xylenes	1330-20-7	<0.00198		0.000341	mg/kg	01.17.20 13:04	U	
Total BTEX		<0.00198		0.000341	mg/kg	01.17.20 13:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	80	70 - 130	%		



## Certificate of Analytical Results

648467



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

## Wrigley Piper Pipeline

Sample Id: SFEW17

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-014

Date Collected: 01.07.20 13.39

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2990	24.8	4.25	mg/kg	01.10.20 21:25		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.14.20 18:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.14.20 18:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.14.20 18:04	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.14.20 18:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	82	70 - 135	%		
o-Terphenyl	84	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.17.20 13:24	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000454	mg/kg	01.17.20 13:24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000563	mg/kg	01.17.20 13:24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.17.20 13:24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000343	mg/kg	01.17.20 13:24	U	1
Total Xylenes	1330-20-7	<0.00199		0.000343	mg/kg	01.17.20 13:24	U	
Total BTEX		<0.00199		0.000343	mg/kg	01.17.20 13:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	70 - 130	%		
4-Bromofluorobenzene	78	70 - 130	%		



# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS11**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-015

Date Collected: 01.06.20 09.10

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112944

Date Prep: 01.10.20 16.35

Prep seq: 7694153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	3650	25.0	4.28	mg/kg	01.10.20 21:21		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.14.20 18:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.14.20 18:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.14.20 18:23	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.14.20 18:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000387	mg/kg	01.17.20 13:44	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000458	mg/kg	01.17.20 13:44	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000568	mg/kg	01.17.20 13:44	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	01.17.20 13:44	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	01.17.20 13:44	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	01.17.20 13:44	U	
Total BTEX		<0.00201		0.000346	mg/kg	01.17.20 13:44	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	70 - 130	%		
4-Bromofluorobenzene	76	70 - 130	%		





# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS12**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-016

Date Collected: 01.06.20 11.31

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112944

Date Prep: 01.10.20 16.35

Prep seq: 7694153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	9.99	5.00	0.858	mg/kg	01.10.20 21:01		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 18:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 18:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 18:41	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.14.20 18:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00198	0.00198	0.000382	mg/kg	01.17.20 14:04	U	1
Toluene	108-88-3	<0.00198	0.00198	0.000452	mg/kg	01.17.20 14:04	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	0.000560	mg/kg	01.17.20 14:04	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	0.00101	mg/kg	01.17.20 14:04	U	1
o-Xylene	95-47-6	<0.00198	0.00198	0.000342	mg/kg	01.17.20 14:04	U	1
Total Xylenes	1330-20-7	<0.00198		0.000342	mg/kg	01.17.20 14:04	U	
Total BTEX		<0.00198		0.000342	mg/kg	01.17.20 14:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	108	70 - 130	%		
4-Bromofluorobenzene	76	70 - 130	%		



# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFF13B**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-017

Date Collected: 01.06.20 13.47

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112944

Date Prep: 01.10.20 16.35

Prep seq: 7694153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	29.3	5.05	0.867	mg/kg	01.10.20 21:28		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 19:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 19:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 19:00	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.14.20 19:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000384	mg/kg	01.17.20 14:25	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000455	mg/kg	01.17.20 14:25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000564	mg/kg	01.17.20 14:25	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	0.00101	mg/kg	01.17.20 14:25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.17.20 14:25	U	1
Total Xylenes	1330-20-7	<0.00200		0.000344	mg/kg	01.17.20 14:25	U	
Total BTEX		<0.00200		0.000344	mg/kg	01.17.20 14:25	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	81	70 - 130	%		



# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS14**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-018

Date Collected: 01.06.20 08.44

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112944

Date Prep: 01.10.20 16.35

Prep seq: 7694153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<4.99	4.99	0.857	mg/kg	01.10.20 22:34	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	14.9	mg/kg	01.15.20 11:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	14.9	mg/kg	01.15.20 11:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	14.9	mg/kg	01.15.20 11:00	U	1
Total TPH	PHC635	<49.8		14.9	mg/kg	01.15.20 11:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	87	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00202	0.00202	0.000388	mg/kg	01.17.20 14:45	U	1
Toluene	108-88-3	<0.00202	0.00202	0.000459	mg/kg	01.17.20 14:45	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	0.000569	mg/kg	01.17.20 14:45	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	0.00102	mg/kg	01.17.20 14:45	U	1
o-Xylene	95-47-6	<0.00202	0.00202	0.000347	mg/kg	01.17.20 14:45	U	1
Total Xylenes	1330-20-7	<0.00202		0.000347	mg/kg	01.17.20 14:45	U	
Total BTEX		<0.00202		0.000347	mg/kg	01.17.20 14:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	112	70 - 130	%		
4-Bromofluorobenzene	80	70 - 130	%		



# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS15**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-019

Date Collected: 01.07.20 09.58

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112944

Date Prep: 01.10.20 16.35

Prep seq: 7694153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	4520	24.8	4.26	mg/kg	01.10.20 21:34		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 19:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 19:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 19:37	U	1
Total TPH	PHC635	<50.0		15.0	mg/kg	01.14.20 19:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	85	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	01.17.20 15:05	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	01.17.20 15:05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	01.17.20 15:05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	01.17.20 15:05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	01.17.20 15:05	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	01.17.20 15:05	U	
Total BTEX		<0.00201		0.000346	mg/kg	01.17.20 15:05	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	112	70 - 130	%		
4-Bromofluorobenzene	80	70 - 130	%		



# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS16**

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-020

Date Collected: 01.07.20 11.49

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112944

Date Prep: 01.10.20 16.35

Prep seq: 7694153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2420	24.8	4.26	mg/kg	01.10.20 21:41		5

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: ARM

% Moist:

Tech: DVM

Seq Number: 3113298

Date Prep: 01.14.20 11.00

Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.14.20 19:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.14.20 19:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.14.20 19:55	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.14.20 19:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00199	0.00199	0.000383	mg/kg	01.17.20 15:25	U	1
Toluene	108-88-3	<0.00199	0.00199	0.000453	mg/kg	01.17.20 15:25	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	0.000561	mg/kg	01.17.20 15:25	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	0.00101	mg/kg	01.17.20 15:25	U	1
o-Xylene	95-47-6	<0.00199	0.00199	0.000342	mg/kg	01.17.20 15:25	U	1
Total Xylenes	1330-20-7	<0.00199		0.000342	mg/kg	01.17.20 15:25	U	
Total BTEX		<0.00199		0.000342	mg/kg	01.17.20 15:25	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	111	70 - 130	%		
4-Bromofluorobenzene	82	70 - 130	%		



## Certificate of Analytical Results

648467



## Etech Environmental &amp; Safety Solution, Inc, Midland, TX

## Wrigley Piper Pipeline

Sample Id: SFFS17

Matrix: Soil

Sample Depth:

Lab Sample Id: 648467-021

Date Collected: 01.07.20 13.41

Date Received: 01.09.20 11.56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112944

Date Prep: 01.10.20 16.35

Prep seq: 7694153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	22.4	5.00	0.858	mg/kg	01.10.20 22:01		1

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3113152

Date Prep: 01.10.20 14.00

Prep seq: 7694130

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	15.0	mg/kg	01.11.20 05:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	15.0	mg/kg	01.11.20 05:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	15.0	mg/kg	01.11.20 05:35	U	1
Total TPH	PHC635	<49.9		15.0	mg/kg	01.11.20 05:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113509

Date Prep: 01.15.20 10.30

Prep seq: 7694429

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00201	0.00201	0.000386	mg/kg	01.15.20 14:42	U	1
Toluene	108-88-3	<0.00201	0.00201	0.000457	mg/kg	01.15.20 14:42	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	0.000567	mg/kg	01.15.20 14:42	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	0.00102	mg/kg	01.15.20 14:42	U	1
o-Xylene	95-47-6	<0.00201	0.00201	0.000346	mg/kg	01.15.20 14:42	U	1
Total Xylenes	1330-20-7	<0.00201		0.000346	mg/kg	01.15.20 14:42	U	
Total BTEX		<0.00201		0.000346	mg/kg	01.15.20 14:42	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	106	70 - 130	%		
4-Bromofluorobenzene	78	70 - 130	%		





# Certificate of Analytical Results

648467



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: 7694130-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7694130-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH By SW8015 Mod

Prep Method: 8015

Analyst: DVM

% Moist:

Tech: DVM

Seq Number: 3113152

Date Prep: 01.10.20 14.00

Prep seq: 7694130

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.10.20 21:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.10.20 21:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.10.20 21:11	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	106	70 - 135	%		

Sample Id: 7694152-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7694152-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112945

Date Prep: 01.10.20 14.00

Prep seq: 7694152

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	01.10.20 18:00	U	1

Sample Id: 7694153-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7694153-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3112944

Date Prep: 01.10.20 16.35

Prep seq: 7694153

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<5.00	5.00	0.858	mg/kg	01.10.20 20:41	U	1



# Certificate of Analytical Results

## 648467



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley Piper Pipeline

Sample Id: **7694306-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7694306-1-BLK Date Collected: Date Received:  
 Analytical Method: TPH By SW8015 Mod Prep Method: 8015  
 Analyst: ARM % Moist: Tech: DVM  
 Seq Number: 3113298 Date Prep: 01.14.20 11.00  
 Prep seq: 7694306

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	15.0	mg/kg	01.14.20 12:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	15.0	mg/kg	01.14.20 12:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	15.0	mg/kg	01.14.20 12:06	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Sample Id: **7694429-1-BLK** Matrix: Solid Sample Depth:  
 Lab Sample Id: 7694429-1-BLK Date Collected: Date Received:  
 Analytical Method: BTEX by EPA 8021B Prep Method: 5030B  
 Analyst: KTL % Moist: Tech: KTL  
 Seq Number: 3113509 Date Prep: 01.15.20 10.30  
 Prep seq: 7694429

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	01.15.20 14:22	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	01.15.20 14:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	01.15.20 14:22	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	01.15.20 14:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.15.20 14:22	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	75	70 - 130	%		



# Certificate of Analytical Results

## 648467



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley Piper Pipeline

Sample Id: **7694430-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7694430-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: KTL

% Moist:

Tech: KTL

Seq Number: 3113660

Date Prep: 01.15.20 11.00

Prep seq: 7694430

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00200	0.00200	0.000385	mg/kg	01.17.20 07:41	U	1
Toluene	108-88-3	<0.00200	0.00200	0.000456	mg/kg	01.17.20 07:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	0.000565	mg/kg	01.17.20 07:41	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	0.00101	mg/kg	01.17.20 07:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	0.000344	mg/kg	01.17.20 07:41	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	70	70 - 130	%		



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



## Form 2 - Surrogate Recoveries

Project Name: Wrigley Piper Pipeline

Work Orders 648467,

Project ID:

Lab Batch #: 3113509

Sample: 7694429-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/15/20 12:23

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	70-130	
4-Bromofluorobenzene	0.0280	0.0300	93	70-130	

Lab Batch #: 3113509

Sample: 7694429-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/15/20 12:43

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	70-130	
4-Bromofluorobenzene	0.0267	0.0300	89	70-130	

Lab Batch #: 3113509

Sample: 648467-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/15/20 13:03

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0318	0.0300	106	70-130	
4-Bromofluorobenzene	0.0280	0.0300	93	70-130	

Lab Batch #: 3113509

Sample: 648467-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/15/20 13:24

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0318	0.0300	106	70-130	
4-Bromofluorobenzene	0.0276	0.0300	92	70-130	

Lab Batch #: 3113509

Sample: 7694429-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/15/20 14:22

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	70-130	
4-Bromofluorobenzene	0.0224	0.0300	75	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Wrigley Piper Pipeline

Work Orders 648467,

Project ID:

Lab Batch #: 3113660

Sample: 7694430-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/17/20 05:41

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0267	0.0300	89	70-130	

Lab Batch #: 3113660

Sample: 7694430-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/17/20 06:02

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

Lab Batch #: 3113660

Sample: 648467-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/17/20 06:22

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0264	0.0300	88	70-130	

Lab Batch #: 3113660

Sample: 648467-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/17/20 06:42

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0273	0.0300	91	70-130	

Lab Batch #: 3113660

Sample: 7694430-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/17/20 07:41

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0210	0.0300	70	70-130	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.





## Form 2 - Surrogate Recoveries

Project Name: Wrigley Piper Pipeline

Work Orders 648467,

Project ID:

Lab Batch #: 3113152

Sample: 7694130-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/10/20 21:11

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	53.0	50.0	106	70-135	

Lab Batch #: 3113152

Sample: 7694130-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/10/20 21:32

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	62.0	50.0	124	70-135	

Lab Batch #: 3113152

Sample: 7694130-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/10/20 21:53

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	60.5	50.0	121	70-135	

Lab Batch #: 3113152

Sample: 648287-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/10/20 22:36

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	99.7	120	70-135	
o-Terphenyl	56.8	49.9	114	70-135	

Lab Batch #: 3113152

Sample: 648287-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/10/20 22:56

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.9	115	70-135	
o-Terphenyl	55.6	50.0	111	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Wrigley Piper Pipeline

Work Orders 648467,

Project ID:

Lab Batch #: 3113298

Sample: 7694306-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/14/20 12:06

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	50.4	50.0	101	70-135	

Lab Batch #: 3113298

Sample: 7694306-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/14/20 12:24

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 3113298

Sample: 7694306-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/14/20 12:43

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	48.4	50.0	97	70-135	

Lab Batch #: 3113298

Sample: 648467-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/14/20 13:21

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.6	103	70-135	
o-Terphenyl	45.1	49.8	91	70-135	

Lab Batch #: 3113298

Sample: 648467-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/14/20 13:40

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.7	104	70-135	
o-Terphenyl	44.1	49.9	88	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## BS / BSD Recoveries



Project Name: Wrigley Piper Pipeline

Work Order #: 648467

Analyst: KTL

Date Prepared: 01/15/2020

Project ID:

Date Analyzed: 01/15/2020

Lab Batch ID: 3113509

Sample: 7694429-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000385	0.100	0.111	111	0.100	0.103	103	7	70-130	35	
Toluene	<0.000456	0.100	0.104	104	0.100	0.0925	93	12	70-130	35	
Ethylbenzene	<0.000565	0.100	0.0996	100	0.100	0.0882	88	12	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.195	98	0.200	0.172	86	13	70-130	35	
o-Xylene	<0.000344	0.100	0.0967	97	0.100	0.0860	86	12	70-130	35	

Analyst: KTL

Date Prepared: 01/15/2020

Date Analyzed: 01/17/2020

Lab Batch ID: 3113660

Sample: 7694430-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000385	0.100	0.113	113	0.100	0.105	105	7	70-130	35	
Toluene	0.000680	0.100	0.100	100	0.100	0.0927	93	8	70-130	35	
Ethylbenzene	<0.000565	0.100	0.0924	92	0.100	0.0865	87	7	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.180	90	0.200	0.169	85	6	70-130	35	
o-Xylene	<0.000344	0.100	0.0910	91	0.100	0.0858	86	6	70-130	35	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## BS / BSD Recoveries



Project Name: Wrigley Piper Pipeline

Work Order #: 648467

Analyst: CHE

Date Prepared: 01/10/2020

Project ID:

Date Analyzed: 01/10/2020

Lab Batch ID: 3112945

Sample: 7694152-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	248	99	250	244	98	2	90-110	20	

Analyst: CHE

Date Prepared: 01/10/2020

Date Analyzed: 01/10/2020

Lab Batch ID: 3112944

Sample: 7694153-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	240	96	250	240	96	0	90-110	20	

Analyst: DVM

Date Prepared: 01/10/2020

Date Analyzed: 01/10/2020

Lab Batch ID: 3113152

Sample: 7694130-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	33.3	1000	1020	102	1000	992	99	3	70-135	20	
Diesel Range Organics (DRO)	22.5	1000	1020	102	1000	1000	100	2	70-135	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



# BS / BSD Recoveries



**Project Name: Wrigley Piper Pipeline**

**Work Order #: 648467**

**Project ID:**

**Analyst: ARM**

**Date Prepared: 01/14/2020**

**Date Analyzed: 01/14/2020**

**Lab Batch ID: 3113298**

**Sample: 7694306-1-BKS**

**Batch #: 1**

**Matrix: Solid**

**Units: mg/kg**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod  Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	869	87	1000	853	85	2	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	820	82	1000	814	81	1	70-135	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley Piper Pipeline

Work Order #: 648467

Project ID:

Lab Batch ID: 3113509

QC- Sample ID: 648467-021 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/15/2020

Date Prepared: 01/15/2020

Analyst: KTL

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000385	0.100	0.0963	96	0.0998	0.101	101	5	70-130	35	
Toluene	<0.000456	0.100	0.0903	90	0.0998	0.0908	91	1	70-130	35	
Ethylbenzene	<0.000565	0.100	0.0864	86	0.0998	0.0852	85	1	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.169	85	0.200	0.165	83	2	70-130	35	
o-Xylene	<0.000344	0.100	0.0843	84	0.0998	0.0833	83	1	70-130	35	

Lab Batch ID: 3113660

QC- Sample ID: 648467-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/17/2020

Date Prepared: 01/15/2020

Analyst: KTL

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000383	0.0994	0.0680	68	0.0994	0.0662	67	3	70-130	35	X
Toluene	<0.000453	0.0994	0.0500	50	0.0994	0.0521	52	4	70-130	35	X
Ethylbenzene	<0.000561	0.0994	0.0406	41	0.0994	0.0440	44	8	70-130	35	X
m,p-Xylenes	<0.00101	0.199	0.0791	40	0.199	0.0870	44	10	70-130	35	X
o-Xylene	<0.000342	0.0994	0.0412	41	0.0994	0.0448	45	8	70-130	35	X

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.





## Form 3 - MS / MSD Recoveries



Project Name: Wrigley Piper Pipeline

Work Order #: 648467

Project ID:

Lab Batch ID: 3112944

QC- Sample ID: 648467-016 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/10/2020

Date Prepared: 01/10/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	9.99	250	266	102	250	268	103	1	90-110	20	

Lab Batch ID: 3112944

QC- Sample ID: 648467-018 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/10/2020

Date Prepared: 01/10/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	4.37	250	267	105	250	267	105	0	90-110	20	

Lab Batch ID: 3112945

QC- Sample ID: 648467-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/10/2020

Date Prepared: 01/10/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	3.06	248	265	106	248	262	104	1	90-110	20	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries



Project Name: Wrigley Piper Pipeline

Work Order #: 648467

Project ID:

Lab Batch ID: 3112945

QC- Sample ID: 648467-005 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/10/2020

Date Prepared: 01/10/2020

Analyst: CHE

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	6.85	252	277	107	252	277	107	0	90-110	20	

Lab Batch ID: 3113152

QC- Sample ID: 648287-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/10/2020

Date Prepared: 01/10/2020

Analyst: DVM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	31.3	997	1060	103	999	1020	99	4	70-135	20	
Diesel Range Organics (DRO)	17.1	997	1090	108	999	1050	103	4	70-135	20	

Lab Batch ID: 3113298

QC- Sample ID: 648467-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/14/2020

Date Prepared: 01/14/2020

Analyst: ARM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<14.9	996	812	82	997	827	83	2	70-135	20	
Diesel Range Organics (DRO)	<14.9	996	772	78	997	788	79	2	70-135	20	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.







Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West 120 East Odessa, TX 79765 (432)563-1800  
j:0001-c

# CHAIN OF CUSTODY RECORD

Page 2 of 3

LAB W.O. #:

Field billable Hrs:

Company: Etch Environmental

Phone: (575)396-2378

Address: 3100 Plains Hwy.

Fax: (575)396-1429

City: Lovington

State: NM Zip: 88260

PM/Attn: Joel Lowry

Email: pm@etchemv.com

Project ID: Wrigley to Piper Pipeline

PO#: PAA-C Bryant

Invoice To: Ralph Tijerina, Goodnight Midstream

Quote #:

Sampler Name: Hilda Villa

Circle One Event: Daily Weekly Monthly Quarterly  
Semi-Annual Annual N/A

Sample # Sample ID Collect Date Collect Time Matrix Code Field Filtered Integrity OK (Y/N) Total # of containers

1 SFEW14 1/17/2020 8:35 Soil 1

2 SFEW15B 1/17/2020 10:30 Soil 1

3 SFEW16 1/17/2020 11:48 Soil 1

4 SFEW17 1/17/2020 13:39 Soil 1

5 SFFS11 1/6/2020 9:10 Soil 1

6 SFFS12 1/6/2020 11:31 Soil 1

7 SFFS13B 1/6/2020 13:47 Soil 1

8 SFFS14 1/17/2020 8:44 Soil 1

9 SFFS15 1/17/2020 9:58 Soil 1

0 SFFS16 1/17/2020 11:49 Soil 1

Reg. Program / Clean-up Std STATE for Certs & Regs QA/QC Level & Certification

CTLS TRRP DW NPDES LPST DryCh FL TX GA NC SC NJ PA OK LA 1 2 3 4 CLP AFCEE OAPP NELAC DOD-ELAP Other:

Relinquished by Affiliation Date Time

1 1/8/20 14:35

2 1/8/20 4:10

3

4

TAT Work Days = D Need results by: Time:

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

## ANALYSES REQUESTED

Example Volatiles by 8260  
TPH 8015M  
BTEX  
C

Hold Sample (CALL) Run PAH on Highest TPH Only If

## \* Container Type Codes

VA Vial Amber ES Enco Sampler  
VC Vial Clear TS TerraCore Sampler  
VFP Vial Pre-preserved TB Air Canister  
GC Glass Amber ZB Teller Bag  
GC Glass Clear ZL Zip Lock Bag  
PA Plastic Amber PC Plastic Clear  
Other: Plastic Clear

## \*\* Preservative Type Codes

A. None E. HCL I. Ice  
B. HNO<sub>3</sub> F. MeOH J. MCAA  
C. H<sub>2</sub>SO<sub>4</sub> G. Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub> K. ZnAc<sub>2</sub>NaOH  
D. NaOH H. NaHSO<sub>4</sub> L. Aspc Acid/NaOH  
O.

## Matrix Type Codes

GW Ground Water S Soil/Sediment/Solid  
WW Waste Water W Wipe  
DW Drinking Water A Air  
SW Surface Water O Oil  
OW Ocean/Sea Water T Tissue  
PL Product-Liquid U Urine  
PS Product-Solid B Blood  
SL Sludge

## REMARKS

## Lab Use Only

Non-Conformances found? YES NO N/A  
Samples intact upon arrival?  
Received on Wet Ice?  
Labeled with proper preservative?  
Received within holding time?  
Custody seals intact?  
VOCs rec'd w/o headspace?  
Proper containers used?  
pH verified acceptable, excl VOCs?  
Received on time to meet HTs?

38A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330

FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099





Houston: 4143 Greenbrier Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West 120 East Odessa, TX 79765 (432)563-1800  
 Instrumented Analytic Methodology

# CHAIN OF CUSTODY RECORD

Page 3 of 3

LAB W.O. # : 104944

Field billable Hrs : 104944

Company: Etech Environmental Phone: (575)396-2378

Address: 3100 Plains Hwy. Fax: (575)396-1429

City: Lovington State: NM Zip: 88260

PM/Attn: Joel Lowry Email: [jm@etechenv.com](mailto:jm@etechenv.com)

Project ID: Wrigley to Piper Pipeline PO#: PAA-C Bryant

Invoice To: Ralph Tierina, Goodnight Midstream Quote #:

Sampler Name: Circle One Event: Daily Weekly Monthly Quarterly  
 Hilda Villa Semi-Annual Annual N/A

Sample # Sample ID Collect Date Collect Time Matrix Code Field Filtered Integrity OK (Y/N) Total # of Containers

1 SFFS17 1/7/2020 13:41 Soil 1

2

3

4

5

6

7

8

9

0

Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DYCn

Other: Relinquished by Affiliation Date Time

1 1/8/20 14:35

2 1/8/20 4:10

TAT Work Days = D Need results by: Time:

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

## ANALYSES REQUESTED

Example Volatiles by 8260 GC GC GC

TPH 8015M BTEX C

# Cont Lab Only:

Hold Sample (CALL) Run PAH on Highest TPH Only If

REMARKS

Matrix Type Codes

GW Ground Water S Soil/Sediment/Solid

WW Waste Water W Wipe

DW Drinking Water A Air

SW Surface Water O Oil

OW Ocean/Sea Water T Tissue

PL Product-Liquid U Urine

PS Product-Solid B Blood

Sl Sludge

Other

Lab Use Only YES NO N/A

Non-Conformance found?

Received on time to meet HT?

CO.C. Serial #

\* Container Type Codes  
 VA Vial Amber ES Enviro Sampler  
 VC Vial Clear TS TerraCore Sampler  
 VAC Vial Pre-preserved AC Air Canister  
 GC Glass Amber TB Tedlar Bag  
 PC Plastic Amber ZB Zip Lock Bag  
 PA Plastic Amber PC Plastic Clear  
 Other

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal  
 40ml, 125 ml, 250 ml, 500 ml, 1L, Other

\*\* Preservative Type Codes  
 A. None E. HCL I. Ice  
 B. HNO<sub>3</sub> F. MeOH J. MCAA  
 C. H<sub>2</sub>SO<sub>4</sub> G. Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub> K. ZnAc<sub>2</sub>/NaOH  
 D. NaOH H. NaHSO<sub>4</sub> L. Aspic Acid/NaOH  
 O

## Matrix Type Codes

GW Ground Water S Soil/Sediment/Solid  
 WW Waste Water W Wipe  
 DW Drinking Water A Air  
 SW Surface Water O Oil  
 OW Ocean/Sea Water T Tissue  
 PL Product-Liquid U Urine  
 PS Product-Solid B Blood  
 Sl Sludge

## REMARKS



Client: Etech Environmental &amp; Safety Solution, I

Date/ Time Received: 01/09/2020 11:56:08 AM

Work Order #: 648467

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01/09/2020

Checklist reviewed by:

Jessica Kramer

Date: 01/09/2020





# Certificate of Analysis Summary 648785

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Wrigley Piper Pipeline

Project Id:

Contact: Joel Lowry

Project Location:

Date Received in Lab: Mon Jan-13-20 11:05 am

Report Date: 22-JAN-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	648785-002	648785-003	648785-004	648785-005	648785-006	648785-007
	<i>Field Id:</i>	SFEW19	SFEW20B	SFEW21A	SFEW22	SFEW18C	SFEW19
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-08-20 00:00	Jan-08-20 00:00	Jan-09-20 00:00	Jan-09-20 00:00	Jan-08-20 00:00	Jan-08-20 00:00
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jan-21-20 13:30	Jan-21-20 13:30	Jan-21-20 13:30	Jan-21-20 13:30	Jan-21-20 13:30	Jan-21-20 13:30
	<i>Analyzed:</i>	Jan-21-20 17:56	Jan-21-20 18:16	Jan-21-20 18:36	Jan-21-20 18:56	Jan-21-20 19:16	Jan-21-20 19:36
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199
m,p-Xylenes		<0.00404 0.00404	<0.00401 0.00401	<0.00403 0.00403	<0.00402 0.00402	<0.00398 0.00398	<0.00398 0.00398
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Jan-13-20 15:40	Jan-13-20 15:40	Jan-13-20 15:40	Jan-13-20 15:40	Jan-13-20 15:40	Jan-13-20 15:40
	<i>Analyzed:</i>	Jan-13-20 19:32	Jan-13-20 19:52	Jan-13-20 20:45	Jan-13-20 20:51	Jan-13-20 20:58	Jan-13-20 21:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		195 5.00	<5.03 5.03	<4.98 4.98	68.4 4.95	<4.99 4.99	<5.00 5.00
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jan-16-20 16:00	Jan-16-20 16:00	Jan-16-20 16:00	Jan-16-20 16:00	Jan-16-20 16:00	Jan-16-20 16:00
	<i>Analyzed:</i>	Jan-16-20 21:17	Jan-16-20 22:20	Jan-16-20 22:41	Jan-16-20 23:02	Jan-16-20 23:23	Jan-16-20 23:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Total TPH		<50.0 50.0	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8

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

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 648785

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Wrigley Piper Pipeline

Project Id:

Date Received in Lab: Mon Jan-13-20 11:05 am

Contact: Joel Lowry

Report Date: 22-JAN-20

Project Location:

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	648785-008	648785-009	648785-010	648785-011		
	<i>Field Id:</i>	SFFS18	SFFS19	SFFS20	SFFS21		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jan-08-20 00:00	Jan-08-20 00:00	Jan-09-20 00:00	Jan-09-20 00:00		
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jan-21-20 13:30	Jan-21-20 13:30	Jan-21-20 13:30	Jan-21-20 13:30		
	<i>Analyzed:</i>	Jan-21-20 19:56	Jan-21-20 20:17	Jan-21-20 20:37	Jan-21-20 20:57		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201		
Toluene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201		
Ethylbenzene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201		
m,p-Xylenes		<0.00397 0.00397	<0.00396 0.00396	<0.00400 0.00400	<0.00402 0.00402		
o-Xylene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201		
Total Xylenes		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201		
Total BTEX		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201		
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Jan-13-20 15:40	Jan-13-20 15:40	Jan-13-20 15:40	Jan-13-20 15:40		
	<i>Analyzed:</i>	Jan-13-20 21:25	Jan-13-20 21:31	Jan-13-20 21:51	Jan-13-20 21:58		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		4560 25.2	4160 25.1	4680 25.1	4240 25.0		
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jan-16-20 16:00	Jan-16-20 16:00	Jan-16-20 16:00	Jan-16-20 16:00		
	<i>Analyzed:</i>	Jan-17-20 00:06	Jan-17-20 00:27	Jan-17-20 00:48	Jan-17-20 01:09		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		
Total TPH		<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0		

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 The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
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Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

 Jessica Kramer  
 Project Assistant

# **Analytical Report 648785**

**for**

## **Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**

**Wrigley Piper Pipeline**

**22-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



22-JAN-20

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **648785**  
**Wrigley Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 648785. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 648785 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

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**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 648785****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley Piper Pipeline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SFEW19	S	01-08-20 00:00		648785-002
SFEW20B	S	01-08-20 00:00		648785-003
SFEW21A	S	01-09-20 00:00		648785-004
SFEW22	S	01-09-20 00:00		648785-005
SFWW18C	S	01-08-20 00:00		648785-006
SFWW19	S	01-08-20 00:00		648785-007
SFFS18	S	01-08-20 00:00		648785-008
SFFS19	S	01-08-20 00:00		648785-009
SFFS20	S	01-09-20 00:00		648785-010
SFFS21	S	01-09-20 00:00		648785-011
SFEW18	S	01-08-20 00:00		Not Analyzed

**CASE NARRATIVE****Client Name: Etech Environmental & Safety Solution, Inc****Project Name: Wrigley Piper Pipeline**

Project ID:

Work Order Number(s): 648785

Report Date: 22-JAN-20

Date Received: 01/13/2020

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**Sample receipt non conformances and comments:**

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3113081 Inorganic Anions by EPA 300

Lab Sample ID 648785-007 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 648785-002, -003, -004, -005, -006, -007, -008, -009, -010, -011.

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

Batch: LBA-3114013 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.





# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFEW19**  
Lab Sample Id: 648785-002

Matrix: Soil  
Date Collected: 01.08.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.13.20 15.40

Basis: Wet Weight

Seq Number: 3113081

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	195	5.00	mg/kg	01.13.20 19.32		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.16.20 16.00

Basis: Wet Weight

Seq Number: 3113634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.16.20 21.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.16.20 21.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.16.20 21.17	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.16.20 21.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.16.20 21.17	
o-Terphenyl	84-15-1	96	%	70-135	01.16.20 21.17	



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFEW19**  
Lab Sample Id: 648785-002

Matrix: Soil  
Date Collected: 01.08.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 17.56	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 17.56	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 17.56	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.21.20 17.56	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 17.56	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 17.56	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 17.56	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	91	%	70-130	01.21.20 17.56		
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.21.20 17.56		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFEW20B**

Matrix: Soil

Date Received: 01.13.20 11.05

Lab Sample Id: 648785-003

Date Collected: 01.08.20 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.13.20 15.40

Basis: Wet Weight

Seq Number: 3113081

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	01.13.20 19.52	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.16.20 16.00

Basis: Wet Weight

Seq Number: 3113634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.16.20 22.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.16.20 22.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.16.20 22.20	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.16.20 22.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	01.16.20 22.20	
o-Terphenyl	84-15-1	110	%	70-135	01.16.20 22.20	



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFEW20B**

Matrix: Soil

Date Received: 01.13.20 11.05

Lab Sample Id: 648785-003

Date Collected: 01.08.20 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.21.20 18.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.20 18.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.20 18.16	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.21.20 18.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.20 18.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.20 18.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.20 18.16	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	85	%	70-130	01.21.20 18.16		
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.21.20 18.16		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFEW21A**

Matrix: Soil

Date Received: 01.13.20 11.05

Lab Sample Id: 648785-004

Date Collected: 01.09.20 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.13.20 15.40

Basis: Wet Weight

Seq Number: 3113081

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	01.13.20 20.45	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.16.20 16.00

Basis: Wet Weight

Seq Number: 3113634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.16.20 22.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.16.20 22.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.16.20 22.41	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.16.20 22.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	01.16.20 22.41	
o-Terphenyl	84-15-1	111	%	70-135	01.16.20 22.41	



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFEW21A**

Matrix: Soil

Date Received: 01.13.20 11.05

Lab Sample Id: 648785-004

Date Collected: 01.09.20 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.20 18.36	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.20 18.36	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.20 18.36	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.21.20 18.36	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.20 18.36	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.20 18.36	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.20 18.36	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.21.20 18.36		
4-Bromofluorobenzene	460-00-4	80	%	70-130	01.21.20 18.36		





# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFEW22**  
Lab Sample Id: 648785-005

Matrix: Soil  
Date Collected: 01.09.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.13.20 15.40

Basis: Wet Weight

Seq Number: 3113081

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	68.4	4.95	mg/kg	01.13.20 20.51		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.16.20 16.00

Basis: Wet Weight

Seq Number: 3113634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.16.20 23.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.16.20 23.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.16.20 23.02	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.16.20 23.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	01.16.20 23.02	
o-Terphenyl	84-15-1	104	%	70-135	01.16.20 23.02	



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFEW22**  
Lab Sample Id: 648785-005

Matrix: Soil  
Date Collected: 01.09.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.21.20 18.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.21.20 18.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.21.20 18.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.21.20 18.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.21.20 18.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.21.20 18.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.21.20 18.56	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	114	%	70-130	01.21.20 18.56		
4-Bromofluorobenzene	460-00-4	83	%	70-130	01.21.20 18.56		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFWW18C**

Matrix: Soil

Date Received: 01.13.20 11.05

Lab Sample Id: 648785-006

Date Collected: 01.08.20 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.13.20 15.40

Basis: Wet Weight

Seq Number: 3113081

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	01.13.20 20.58	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.16.20 16.00

Basis: Wet Weight

Seq Number: 3113634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.16.20 23.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.16.20 23.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.16.20 23.23	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.16.20 23.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	01.16.20 23.23	
o-Terphenyl	84-15-1	104	%	70-135	01.16.20 23.23	



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFWW18C**

Matrix: Soil

Date Received: 01.13.20 11.05

Lab Sample Id: 648785-006

Date Collected: 01.08.20 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.21.20 19.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.21.20 19.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.21.20 19.16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.21.20 19.16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.21.20 19.16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.21.20 19.16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.21.20 19.16	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.21.20 19.16		
4-Bromofluorobenzene	460-00-4	82	%	70-130	01.21.20 19.16		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFWW19**  
Lab Sample Id: 648785-007

Matrix: Soil  
Date Collected: 01.08.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3113081

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 01.13.20 15.40

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.13.20 21.05	U	1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3113634

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 01.16.20 16.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.16.20 23.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.16.20 23.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.16.20 23.45	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.16.20 23.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	01.16.20 23.45	
o-Terphenyl	84-15-1	108	%	70-135	01.16.20 23.45	



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFWW19**

Matrix: Soil

Date Received: 01.13.20 11.05

Lab Sample Id: 648785-007

Date Collected: 01.08.20 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.21.20 19.36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.21.20 19.36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.21.20 19.36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.21.20 19.36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.21.20 19.36	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.21.20 19.36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.21.20 19.36	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	85	%	70-130	01.21.20 19.36		
1,4-Difluorobenzene	540-36-3	116	%	70-130	01.21.20 19.36		





# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS18**  
Lab Sample Id: 648785-008

Matrix: Soil  
Date Collected: 01.08.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3113081

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 01.13.20 15.40

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4560	25.2	mg/kg	01.13.20 21.25		5

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3113634

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 01.16.20 16.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.17.20 00.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.17.20 00.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.17.20 00.06	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.17.20 00.06	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	104	%	70-135	01.17.20 00.06		
o-Terphenyl	84-15-1	103	%	70-135	01.17.20 00.06		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS18**  
Lab Sample Id: 648785-008

Matrix: Soil  
Date Collected: 01.08.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.21.20 19.56	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.21.20 19.56	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.21.20 19.56	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.21.20 19.56	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.21.20 19.56	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.21.20 19.56	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.21.20 19.56	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.21.20 19.56		
4-Bromofluorobenzene	460-00-4	80	%	70-130	01.21.20 19.56		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS19**  
Lab Sample Id: 648785-009

Matrix: Soil  
Date Collected: 01.08.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.13.20 15.40

Basis: Wet Weight

Seq Number: 3113081

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<b>4160</b>	25.1	mg/kg	01.13.20 21.31		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.16.20 16.00

Basis: Wet Weight

Seq Number: 3113634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.17.20 00.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.17.20 00.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.17.20 00.27	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.17.20 00.27	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	107	%	70-135	01.17.20 00.27		
o-Terphenyl	84-15-1	105	%	70-135	01.17.20 00.27		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS19**  
Lab Sample Id: 648785-009

Matrix: Soil  
Date Collected: 01.08.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.21.20 20.17	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.21.20 20.17	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.21.20 20.17	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.21.20 20.17	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.21.20 20.17	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.21.20 20.17	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.21.20 20.17	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	82	%	70-130	01.21.20 20.17		
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.21.20 20.17		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS20**  
Lab Sample Id: 648785-010

Matrix: Soil  
Date Collected: 01.09.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3113081

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 01.13.20 15.40

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4680	25.1	mg/kg	01.13.20 21.51		5

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3113634

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 01.16.20 16.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.17.20 00.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.17.20 00.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.17.20 00.48	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.17.20 00.48	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	108	%	70-135	01.17.20 00.48		
o-Terphenyl	84-15-1	106	%	70-135	01.17.20 00.48		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS20**  
Lab Sample Id: 648785-010

Matrix: Soil  
Date Collected: 01.09.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.21.20 20.37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.20 20.37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.20 20.37	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.21.20 20.37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.20 20.37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.20 20.37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.20 20.37	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	117	%	70-130	01.21.20 20.37		
4-Bromofluorobenzene	460-00-4	86	%	70-130	01.21.20 20.37		





# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS21**  
Lab Sample Id: 648785-011

Matrix: Soil  
Date Collected: 01.09.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.13.20 15.40

Basis: Wet Weight

Seq Number: 3113081

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4240	25.0	mg/kg	01.13.20 21.58		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.16.20 16.00

Basis: Wet Weight

Seq Number: 3113634

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.17.20 01.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.17.20 01.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.17.20 01.09	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.17.20 01.09	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	108	%	70-135	01.17.20 01.09		
o-Terphenyl	84-15-1	108	%	70-135	01.17.20 01.09		



# Certificate of Analytical Results 648785



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley Piper Pipeline

Sample Id: **SFFS21**  
Lab Sample Id: 648785-011

Matrix: Soil  
Date Collected: 01.09.20 00.00

Date Received: 01.13.20 11.05

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.21.20 13.30

Basis: Wet Weight

Seq Number: 3114013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.21.20 20.57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.21.20 20.57	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.21.20 20.57	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.21.20 20.57	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.21.20 20.57	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.21.20 20.57	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.21.20 20.57	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	79	%	70-130	01.21.20 20.57		
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.21.20 20.57		



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



**Etech Environmental & Safety Solution, Inc**  
Wrigley Piper Pipeline

**Analytical Method: Chloride by EPA 300**

Seq Number: 3113081

MB Sample Id: 7694225-1-BLK

Matrix: Solid

LCS Sample Id: 7694225-1-BKS

Prep Method: E300P

Date Prep: 01.13.20

LCSD Sample Id: 7694225-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	259	104	259	104	90-110	0	20	mg/kg	01.13.20 19:18	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3113081

Parent Sample Id: 648785-002

Matrix: Soil

MS Sample Id: 648785-002 S

Prep Method: E300P

Date Prep: 01.13.20

MSD Sample Id: 648785-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	195	250	463	107	455	104	90-110	2	20	mg/kg	01.13.20 19:38	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3113081

Parent Sample Id: 648785-007

Matrix: Soil

MS Sample Id: 648785-007 S

Prep Method: E300P

Date Prep: 01.13.20

MSD Sample Id: 648785-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	288	115	284	114	90-110	1	20	mg/kg	01.13.20 21:11	X

**Analytical Method: TPH By SW8015 Mod**

Seq Number: 3113634

MB Sample Id: 7694553-1-BLK

Matrix: Solid

LCS Sample Id: 7694553-1-BKS

Prep Method: SW8015P

Date Prep: 01.16.20

LCSD Sample Id: 7694553-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1140	114	1100	110	70-135	4	20	mg/kg	01.16.20 20:34	
Diesel Range Organics (DRO)	<15.0	1000	1030	103	1010	101	70-135	2	20	mg/kg	01.16.20 20:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		126		121		70-135	%	01.16.20 20:34
o-Terphenyl	118		121		121		70-135	%	01.16.20 20:34

**Analytical Method: TPH By SW8015 Mod**

Seq Number: 3113634

Matrix: Solid

MB Sample Id: 7694553-1-BLK

Prep Method: SW8015P

Date Prep: 01.16.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.16.20 20:13	

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

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

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

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



# Etech Environmental & Safety Solution, Inc Wrigley Piper Pipeline

Analytical Method: TPH By SW8015 Mod

Seq Number: 3113634

Parent Sample Id: 648785-002

Matrix: Soil

MS Sample Id: 648785-002 S

Prep Method: SW8015P

Date Prep: 01.16.20

MSD Sample Id: 648785-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	15.5	997	876	86	761	75	70-135	14	20	mg/kg	01.16.20 21:38	
Diesel Range Organics (DRO)	18.1	997	888	87	761	74	70-135	15	20	mg/kg	01.16.20 21:38	

**Surrogate**

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		71		70-135	%	01.16.20 21:38
o-Terphenyl	111		92		70-135	%	01.16.20 21:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3114013

MB Sample Id: 7694841-1-BLK

Matrix: Solid

LCS Sample Id: 7694841-1-BKS

Prep Method: SW5030B

Date Prep: 01.21.20

LCSD Sample Id: 7694841-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.120	120	0.113	113	70-130	6	35	mg/kg	01.21.20 15:36	
Toluene	<0.000456	0.100	0.106	106	0.102	102	70-130	4	35	mg/kg	01.21.20 15:36	
Ethylbenzene	<0.000565	0.100	0.0987	99	0.0960	96	70-130	3	35	mg/kg	01.21.20 15:36	
m,p-Xylenes	<0.00101	0.200	0.194	97	0.189	95	70-130	3	35	mg/kg	01.21.20 15:36	
o-Xylene	<0.000344	0.100	0.0959	96	0.0938	94	70-130	2	35	mg/kg	01.21.20 15:36	

**Surrogate**

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		105		70-130	%	01.21.20 15:36
4-Bromofluorobenzene	81		88		89		70-130	%	01.21.20 15:36

Analytical Method: BTEX by EPA 8021B

Seq Number: 3114013

Parent Sample Id: 648785-002

Matrix: Soil

MS Sample Id: 648785-002 S

Prep Method: SW5030B

Date Prep: 01.21.20

MSD Sample Id: 648785-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000606	0.101	0.100	98	0.0965	96	70-130	4	35	mg/kg	01.21.20 16:16	
Toluene	<0.000459	0.101	0.0906	90	0.0862	86	70-130	5	35	mg/kg	01.21.20 16:16	
Ethylbenzene	<0.000569	0.101	0.0846	84	0.0795	80	70-130	6	35	mg/kg	01.21.20 16:16	
m,p-Xylenes	<0.00102	0.202	0.166	82	0.156	78	70-130	6	35	mg/kg	01.21.20 16:16	
o-Xylene	0.000566	0.101	0.0824	81	0.0776	77	70-130	6	35	mg/kg	01.21.20 16:16	

**Surrogate**

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		112		70-130	%	01.21.20 16:16
4-Bromofluorobenzene	94		94		70-130	%	01.21.20 16:16

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

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

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

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





Houston: 4143 Greenbrier Dr. Stafford, TX 77477 (281)240-4200  
Odessa: 12600 West I-20 East Odessa, TX 79365 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 1 of 2

LAB W.O. #:

Field billable Hrs:

Time:

TAT Work Days = D Need results by:

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

## ANALYSES REQUESTED

Cont Type

GC GC GC

TPH 8015M

BTEX

C

Hold Sample

Run PAH

on Highest TPH

Only if

REMARKS

Matrix Type Codes

Ground Water

Waste Water

Drinking Water

Surface Water

Ocean/Sea Water

Product-Liquid

Product-Solid

Sludge

Other

S Sediment/Solid

W Wipe

A Air

O Oil

T Tissue

U Urine

B Blood

Other

Preservative Type Codes

A. None

B. HNO<sub>3</sub>

C. NaOH

D. NaHSO<sub>4</sub>

E. HCl

F. MeOH

G. Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub>

H. NaHSO<sub>3</sub>

I. Ice

J. MeCN

K. ZnAc<sub>2</sub>/NaOH

L. Ascorbic Acid/NaOH

O. Other

## \* Container Type Codes

VA Vial Amber

VP Vial Clear

GA Glass Amber

GC Glass Clear

PA Plastic Amber

PC Plastic Clear

Other

ES EnCore Sampler

TS TeraCore Sampler

AC Air Canister

TB Teflon Bag

PC Plastic Bag

PC Plastic Bag

PC Plastic Bag

PC Plastic Bag

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## \* Container Type Codes

VA Vial Amber

VP Vial Clear

GA Glass Amber

GC Glass Clear

PA Plastic Amber

PC Plastic Clear

Other

ES EnCore Sampler

TS TeraCore Sampler

AC Air Canister

TB Teflon Bag

PC Plastic Bag

PC Plastic Bag

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VA Vial Amber

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PA Plastic Amber

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Other

ES EnCore Sampler

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Houston: 4143 Greenbrier Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 2 of 2

LAB W.O. #: 1046745

Field billable Hrs: 1046745

Company: Etech Environmental

Phone: (575)396-2378

Address: 3100 Plains Hwy.

Fax: (575)396-1429

City: Lovington

State: NM

Zip: 88260

PM/Attn: Joel Lowry

Email: [jm@etechny.com](mailto:jm@etechny.com)

Project ID: Wrigley to Piper Pipeline

PO#: PAA-C, Bryant

Invoice To: Ralph Tijerina, Goodnight Midstream

Quote #:

Sampler Name: Milda Villa, Matthew Chico

Circle One Event: Daily Weekly Monthly Quarterly

Sample #

Collect Date Collect Time Matrix Code A Field Filtered Integrity OK (Y/N) Total # of containers

1

SFFS21

1/9/2020

1

Example Volatiles by 8260

TPH 8015M

BTEX

IS

Hold Sample (CALL) Run PAH on Highest TPH Only

REMARKS

Matrix Type Codes

Preservative Type Co

Container Type Co

Lab Use Only

YES NO

Non-Conformance Found?

Sample Intact upon arrival?

Received on Wet Ice?

Labelled with proper preservation?

Custody seals intact?

VOCs rec'd w/o headspace?

Proper containers used?

pH verified acceptable, excl VOCs?

Received on time to meet HT?

C.O.C. Serial #

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, an all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.

Revision Date: Nov 12, 2009

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Final 1.000

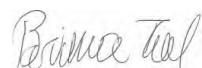
**XENCO Laboratories****Prelogin/Nonconformance Report- Sample Log-In****Client:** Etech Environmental & Safety Solution, I**Date/ Time Received:** 01.13.2020 11.05.25 AM**Work Order #:** 648785**Acceptable Temperature Range:** 0 - 6 degC**Air and Metal samples Acceptable Range:** Ambient**Temperature Measuring device used :** R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	Yes
	Missing sample 001 (SFEW18) placed sample on HOLD.
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

**Checklist completed by:**

Brianna Teel

Date: 01.13.2020

**Checklist reviewed by:**

Jessica Kramer

Date: 01.13.2020



# Certificate of Analysis Summary 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Project Name: Wrigley To Piper Pipeline

Project Id:

Contact: Joel Lowry

Project Location:

Date Received in Lab: Wed 01.15.2020 11:49

Report Date: 01.27.2020 15:56

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	649117-001	649117-002	649117-003	649117-004	649117-005	
	<i>Field Id:</i>	SFWW #22B	SFWW #23B	SFWW #24B	SFWW #25	SFWW #26B	
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	01.13.2020 00:00	01.13.2020 00:00	01.13.2020 00:00	01.13.2020 00:00	01.13.2020 00:00	
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	01.24.2020 14:25	01.24.2020 14:25	01.24.2020 14:25	01.24.2020 14:25	01.24.2020 14:25	
	<i>Analyzed:</i>	01.25.2020 06:11	01.25.2020 06:31	01.25.2020 06:51	01.25.2020 07:11	01.25.2020 07:31	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	
Toluene		<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	
Ethylbenzene		<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	
m,p-Xylenes		<0.00397 0.00397	<0.00403 0.00403	<0.00398 0.00398	<0.00402 0.00402	<0.00402 0.00402	
o-Xylene		<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	
Total Xylenes		<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	
Total BTEX		<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	01.15.2020 16:25	01.15.2020 16:25	01.15.2020 16:25	01.16.2020 11:40	01.16.2020 11:40	
	<i>Analyzed:</i>	01.16.2020 07:11	01.16.2020 07:18	01.16.2020 07:25	01.16.2020 12:03	01.16.2020 12:23	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		56.7 5.04	7.92 4.99	<4.96 4.96	<4.98 4.98	235 4.99	
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	01.21.2020 11:00	01.21.2020 11:00	01.21.2020 11:00	01.21.2020 11:00	01.21.2020 11:00	
	<i>Analyzed:</i>	01.21.2020 16:13	01.21.2020 16:34	01.21.2020 17:16	01.21.2020 17:38	01.21.2020 17:59	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	
Total TPH		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant



# Analytical Report 649117

for

**Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**

**Wrigley To Piper Pipeline**

**01.27.2020**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.27.2020

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **649117**  
**Wrigley To Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 649117. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 649117 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

---

**Jessica Kramer**  
Project Assistant

*A Small Business and Minority Company*

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

**Sample Cross Reference 649117****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley To Piper Pipeline

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SFWW #22B	S	01.13.2020 00:00		649117-001
SFWW #23B	S	01.13.2020 00:00		649117-002
SFWW #24B	S	01.13.2020 00:00		649117-003
SFWW #25	S	01.13.2020 00:00		649117-004
SFWW #26B	S	01.13.2020 00:00		649117-005





## CASE NARRATIVE

*Client Name: Etech Environmental & Safety Solution, Inc*

*Project Name: Wrigley To Piper Pipeline*

Project ID:

Work Order Number(s): 649117

Report Date: 01.27.2020

Date Received: 01.15.2020

---

**Sample receipt non conformances and comments:**

None

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3114420 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #22B**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-001

Date Collected: 01.13.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.15.2020 16:25

Basis: Wet Weight

Seq Number: 3113411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	56.7	5.04	mg/kg	01.16.2020 07:11		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.21.2020 11:00

Basis: Wet Weight

Seq Number: 3114054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.21.2020 16:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.21.2020 16:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.21.2020 16:13	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.21.2020 16:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	01.21.2020 16:13	
o-Terphenyl	84-15-1	82	%	70-135	01.21.2020 16:13	



# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #22B**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-001

Date Collected: 01.13.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.24.2020 14:25

Basis: Wet Weight

Seq Number: 3114420

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.25.2020 06:11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.25.2020 06:11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.25.2020 06:11	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.25.2020 06:11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.25.2020 06:11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.25.2020 06:11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.25.2020 06:11	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	91	%	70-130	01.25.2020 06:11		
1,4-Difluorobenzene	540-36-3	114	%	70-130	01.25.2020 06:11		



# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #23B**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-002

Date Collected: 01.13.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.15.2020 16:25

Basis: Wet Weight

Seq Number: 3113411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.92	4.99	mg/kg	01.16.2020 07:18		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.21.2020 11:00

Basis: Wet Weight

Seq Number: 3114054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	01.21.2020 16:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.21.2020 16:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.21.2020 16:34	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.21.2020 16:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	01.21.2020 16:34	
o-Terphenyl	84-15-1	81	%	70-135	01.21.2020 16:34	



# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #23B**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-002

Date Collected: 01.13.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.24.2020 14:25

Basis: Wet Weight

Seq Number: 3114420

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.25.2020 06:31	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.25.2020 06:31	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.25.2020 06:31	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.25.2020 06:31	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.25.2020 06:31	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.25.2020 06:31	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.25.2020 06:31	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	81	%	70-130	01.25.2020 06:31		
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.25.2020 06:31		



# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #24B**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-003

Date Collected: 01.13.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.15.2020 16:25

Basis: Wet Weight

Seq Number: 3113411

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	01.16.2020 07:25	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.21.2020 11:00

Basis: Wet Weight

Seq Number: 3114054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.21.2020 17:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.21.2020 17:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.21.2020 17:16	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.21.2020 17:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	01.21.2020 17:16	
o-Terphenyl	84-15-1	81	%	70-135	01.21.2020 17:16	





# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #24B**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-003

Date Collected: 01.13.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.24.2020 14:25

Basis: Wet Weight

Seq Number: 3114420

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.25.2020 06:51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.25.2020 06:51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.25.2020 06:51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.25.2020 06:51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.25.2020 06:51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.25.2020 06:51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.25.2020 06:51	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	86	%	70-130	01.25.2020 06:51		
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.25.2020 06:51		



# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #25**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-004

Date Collected: 01.13.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.16.2020 11:40

Basis: Wet Weight

Seq Number: 3113568

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	01.16.2020 12:03	U	1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.21.2020 11:00

Basis: Wet Weight

Seq Number: 3114054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.21.2020 17:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.21.2020 17:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.21.2020 17:38	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.21.2020 17:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	01.21.2020 17:38	
o-Terphenyl	84-15-1	81	%	70-135	01.21.2020 17:38	



# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #25**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-004

Date Collected: 01.13.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.24.2020 14:25

Basis: Wet Weight

Seq Number: 3114420

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.25.2020 07:11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.25.2020 07:11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.25.2020 07:11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.25.2020 07:11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.25.2020 07:11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.25.2020 07:11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.25.2020 07:11	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	85	%	70-130	01.25.2020 07:11		
1,4-Difluorobenzene	540-36-3	113	%	70-130	01.25.2020 07:11		



# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #26B**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-005

Date Collected: 01.13.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.16.2020 11:40

Basis: Wet Weight

Seq Number: 3113568

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	235	4.99	mg/kg	01.16.2020 12:23		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 01.21.2020 11:00

Basis: Wet Weight

Seq Number: 3114054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.21.2020 17:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.21.2020 17:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.21.2020 17:59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.21.2020 17:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	01.21.2020 17:59	
o-Terphenyl	84-15-1	81	%	70-135	01.21.2020 17:59	



# Certificate of Analytical Results 649117

## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley To Piper Pipeline

Sample Id: **SFWW #26B**

Matrix: Soil

Date Received: 01.15.2020 11:49

Lab Sample Id: 649117-005

Date Collected: 01.13.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 01.24.2020 14:25

Basis: Wet Weight

Seq Number: 3114420

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.25.2020 07:31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.25.2020 07:31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.25.2020 07:31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.25.2020 07:31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.25.2020 07:31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.25.2020 07:31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.25.2020 07:31	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	115	%	70-130	01.25.2020 07:31		
4-Bromofluorobenzene	460-00-4	91	%	70-130	01.25.2020 07:31		



## Flagging Criteria

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

\*\* Surrogate recovered outside laboratory control limit.

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

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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





## Etech Environmental & Safety Solution, Inc

### Wrigley To Piper Pipeline

**Analytical Method: Chloride by EPA 300**

Seq Number: 3113411

MB Sample Id: 7694448-1-BLK

Matrix: Solid

LCS Sample Id: 7694448-1-BKS

Prep Method: E300P

Date Prep: 01.15.2020

LCSD Sample Id: 7694448-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	257	103	256	102	90-110	0	20	mg/kg	01.16.2020 03:54	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3113568

MB Sample Id: 7694508-1-BLK

Matrix: Solid

LCS Sample Id: 7694508-1-BKS

Prep Method: E300P

Date Prep: 01.16.2020

LCSD Sample Id: 7694508-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	257	103	257	103	90-110	0	20	mg/kg	01.16.2020 11:50	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3113411

Parent Sample Id: 649086-001

Matrix: Soil

MS Sample Id: 649086-001 S

Prep Method: E300P

Date Prep: 01.15.2020

MSD Sample Id: 649086-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	122	198	299	89	295	87	90-110	1	20	mg/kg	01.16.2020 04:16	X

**Analytical Method: Chloride by EPA 300**

Seq Number: 3113411

Parent Sample Id: 649086-002

Matrix: Soil

MS Sample Id: 649086-002 S

Prep Method: E300P

Date Prep: 01.15.2020

MSD Sample Id: 649086-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	109	198	272	82	274	83	90-110	1	20	mg/kg	01.16.2020 05:58	X

**Analytical Method: Chloride by EPA 300**

Seq Number: 3113568

Parent Sample Id: 649117-004

Matrix: Soil

MS Sample Id: 649117-004 S

Prep Method: E300P

Date Prep: 01.16.2020

MSD Sample Id: 649117-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.27	249	274	109	274	109	90-110	0	20	mg/kg	01.16.2020 12:10	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3113568

Parent Sample Id: 649235-003

Matrix: Soil

MS Sample Id: 649235-003 S

Prep Method: E300P

Date Prep: 01.16.2020

MSD Sample Id: 649235-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.0	252	298	110	294	108	90-110	1	20	mg/kg	01.16.2020 13:43	

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

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

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

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



## Etech Environmental & Safety Solution, Inc

### Wrigley To Piper Pipeline

**Analytical Method: TPH By SW8015 Mod**

Seq Number: 3114054

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.21.2020

MB Sample Id: 7694873-1-BLK

LCS Sample Id: 7694873-1-BKS

LCSD Sample Id: 7694873-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	953	95	972	97	70-135	2	20	mg/kg	01.21.2020 11:58	
Diesel Range Organics (DRO)	<15.0	1000	722	72	721	72	70-135	0	20	mg/kg	01.21.2020 11:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		86		99		70-135	%	01.21.2020 11:58
o-Terphenyl	87		79		77		70-135	%	01.21.2020 11:58

**Analytical Method: TPH By SW8015 Mod**

Seq Number: 3114054

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.21.2020

MB Sample Id: 7694873-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.21.2020 11:37	

**Analytical Method: TPH By SW8015 Mod**

Seq Number: 3114054

Matrix: Soil

Prep Method: SW8015P

Date Prep: 01.21.2020

Parent Sample Id: 649567-021

MS Sample Id: 649567-021 S

MSD Sample Id: 649567-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1000	100	1010	101	70-135	1	20	mg/kg	01.21.2020 13:02	
Diesel Range Organics (DRO)	23.7	997	909	89	913	89	70-135	0	20	mg/kg	01.21.2020 13:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		90		70-135	%	01.21.2020 13:02
o-Terphenyl	81		84		70-135	%	01.21.2020 13:02

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 3114420

Matrix: Solid

Prep Method: SW5030B

Date Prep: 01.24.2020

MB Sample Id: 7695138-1-BLK

LCS Sample Id: 7695138-1-BKS

LCSD Sample Id: 7695138-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.120	120	0.119	119	70-130	1	35	mg/kg	01.25.2020 03:52	
Toluene	<0.000456	0.100	0.105	105	0.104	104	70-130	1	35	mg/kg	01.25.2020 03:52	
Ethylbenzene	<0.000565	0.100	0.0968	97	0.0960	96	70-130	1	35	mg/kg	01.25.2020 03:52	
m,p-Xylenes	<0.00101	0.200	0.190	95	0.189	95	70-130	1	35	mg/kg	01.25.2020 03:52	
o-Xylene	<0.000344	0.100	0.0989	99	0.0968	97	70-130	2	35	mg/kg	01.25.2020 03:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		107		107		70-130	%	01.25.2020 03:52
4-Bromofluorobenzene	78		94		91		70-130	%	01.25.2020 03:52

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

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

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

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



**Etech Environmental & Safety Solution, Inc**  
Wrigley To Piper Pipeline

**Analytical Method: BTEX by EPA 8021B**

Seq Number: 3114420

Parent Sample Id: 649117-001

Matrix: Soil

MS Sample Id: 649117-001 S

Prep Method: SW5030B

Date Prep: 01.24.2020

MSD Sample Id: 649117-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000381	0.0990	0.0976	99	0.0968	97	70-130	1	35	mg/kg	01.25.2020 04:32	
Toluene	0.000665	0.0990	0.0832	83	0.0822	82	70-130	1	35	mg/kg	01.25.2020 04:32	
Ethylbenzene	<0.000559	0.0990	0.0766	77	0.0769	77	70-130	0	35	mg/kg	01.25.2020 04:32	
m,p-Xylenes	<0.00100	0.198	0.150	76	0.150	75	70-130	0	35	mg/kg	01.25.2020 04:32	
o-Xylene	0.000387	0.0990	0.0792	80	0.0783	78	70-130	1	35	mg/kg	01.25.2020 04:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		113		70-130	%	01.25.2020 04:32
4-Bromofluorobenzene	99		96		70-130	%	01.25.2020 04:32

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

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

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

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



Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. #:

Field billable Hrs:

Time:

Phone: (575)396-2378

Fax: (575)396-1429

State: NM Zip: 88260

Email: pm@etecheny.com

PO#: PAA-C. Bryant

Quote #:

Invoice To: Ralph Tijerina, Goodnight Midstream

Circle One Event: Daily Weekly Monthly Quarterly

Semi-Annual Annual N/A

Sample Name: Catalina Villa

Sample ID

Collect Date

Collect Time

Matrix Code A

Field Filtered

Integrity OK (Y/N)

Total # of containers

# Cont

Lab Only:

Example Volatiles by 8260

TPH 8015M

BTEX

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

GC GC GC

TAT Work Days = D Need results by: \_\_\_\_\_ Time: \_\_\_\_\_

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other \_\_\_\_\_

## ANALYSES REQUESTED

* Container Type Codes	
VA Vial Amber	ES Enorg Sample
VC Vial Clear	TS Tartrate Sample
VP Vial Pre-preserved	AC Air-Clear
GA Glass Amber	TB Tedlar Bag
GC Glass Clear	TA Zip-Lock Bag
PA Plastic Amber	PC Plastic Clear
PC Plastic Clear	
Other: _____	
Size(s) 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal, 40ml, 125 ml, 250 ml, 500 ml, 1L, Other _____	
** Preservative Type Codes	
A. None	E. HCL
B. HNO <sub>3</sub>	F. MeOH
C. H <sub>2</sub> SO <sub>4</sub>	G. Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>
D. NaOH	H. NaHSO <sub>4</sub>
I. Aspic Acid/NaOH	L. MCAA
J. MCAA	K. ZnAc&NaOH
M. Aspic Acid/NaOH	N. Aspic Acid/NaOH

Hold Sample (CALL) Run PAH on Highest TPH Only If \_\_\_\_\_

## Matrix Type Codes

GW Ground Water	S Soil/Sediment/Solid
WW Waste Water	W Wipe
DM Drinking Water	A Air
SW Surface Water	O Oil
OW Ocean/Sea Water	T Tissue
PL Product-Liquid	U Urine
PS Product-Solid	B Blood
SL Sludge	
Other: _____	

## REMARKS

Reg Program / Clean-up Sid	STATE for Certs & Regs	QA/QC Level & Certification	EDDs	COC & Labels	Coolers Temp °C	Lab Use Only	YES NO N/A
CTLS TRRP DW NPDES LPST DryCh	FL TX GA NC SC NJ PA OK LA	1 2 3 4 CLP AFCEE QAPP	ADAFT SEDD ERPIIMS	Match Incomplete Absent Unclear	16.426 3	Non-Conformances found? Samples initd upon arrival? Received on Wet Ice? Labeled with proper preservatives? Received within holding time? Custody seal intact? VOCs recd w/o headspace? Proper containers used? pH verified-acceptable, excd VOCs? Received on time to meet HTS?	
Other: _____	AL NM Other: _____	NEIAC DoD-ELAP Other: _____	XLS Other: _____				
Relinquished by: _____	Affiliation: _____	Date: _____	Time: _____				
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.

Revision Date: Nov 12, 2009



Client: Etech Environmental &amp; Safety Solution, I

Date/ Time Received: 01/15/2020 11:49:00 AM

Work Order #: 649117

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01/15/2020

Checklist reviewed by:

Jessica Kramer

Date: 01/15/2020





# Certificate of Analysis Summary 650005

## Etech Environmental & Safety Solution, Inc, Midland, TX

**Project Name:** Wrigley to Piper Pipeline

**Project Id:**
**Date Received in Lab:** Thu Jan-23-20 11:15 am

**Contact:** Joel Lowry

**Report Date:** 24-JAN-20

**Project Location:**
**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	650005-001	650005-002	650005-003	650005-004		
	<i>Field Id:</i>	SFWW3B	SFEW12B	SFEW14B	SFEW17B		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jan-22-20 00:00	Jan-22-20 00:00	Jan-22-20 00:00	Jan-22-20 00:00		
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Jan-23-20 17:00	Jan-23-20 17:00	Jan-23-20 17:00	Jan-23-20 17:00		
	<i>Analyzed:</i>	Jan-23-20 20:16	Jan-23-20 21:09	Jan-23-20 21:16	Jan-23-20 21:22		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		<4.99 4.99	<5.03 5.03	119 5.01	<5.00 5.00		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.9%

Jessica Kramer  
Project Assistant



# **Analytical Report 650005**

**for**  
**Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**  
**Wrigley to Piper Pipeline**

**24-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



24-JAN-20

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **650005**  
**Wrigley to Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 650005. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 650005 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

---

**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 650005****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley to Piper Pipeline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SFWW3B	S	01-22-20 00:00		650005-001
SFEW12B	S	01-22-20 00:00		650005-002
SFEW14B	S	01-22-20 00:00		650005-003
SFEW17B	S	01-22-20 00:00		650005-004



## CASE NARRATIVE

***Client Name: Etech Environmental & Safety Solution, Inc***

***Project Name: Wrigley to Piper Pipeline***

Project ID:

Work Order Number(s): 650005

Report Date: 24-JAN-20

Date Received: 01/23/2020

---

**Sample receipt non conformances and comments:**

---

**Sample receipt non conformances and comments per sample:**

None



## Certificate of Analytical Results 650005



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFWW3B**

Matrix: Soil

Date Received: 01.23.20 11.15

Lab Sample Id: 650005-001

Date Collected: 01.22.20 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.23.20 17.00

Basis: Wet Weight

Seq Number: 3114309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	01.23.20 20.16	U	1



## Certificate of Analytical Results 650005



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFEW12B**

Matrix: Soil

Date Received: 01.23.20 11.15

Lab Sample Id: 650005-002

Date Collected: 01.22.20 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.23.20 17.00

Basis: Wet Weight

Seq Number: 3114309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	01.23.20 21.09	U	1





# Certificate of Analytical Results 650005



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **SFEW14B**

Matrix: Soil

Date Received: 01.23.20 11.15

Lab Sample Id: 650005-003

Date Collected: 01.22.20 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.23.20 17.00

Basis: Wet Weight

Seq Number: 3114309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	119	5.01	mg/kg	01.23.20 21.16		1



## Certificate of Analytical Results 650005



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **SFEW17B**

Matrix: Soil

Date Received: 01.23.20 11.15

Lab Sample Id: 650005-004

Date Collected: 01.22.20 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.23.20 17.00

Basis: Wet Weight

Seq Number: 3114309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.23.20 21.22	U	1



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



**Etech Environmental & Safety Solution, Inc**  
Wrigley to Piper Pipeline

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114309

MB Sample Id: 7695083-1-BLK

Matrix: Solid

LCS Sample Id: 7695083-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

LCSD Sample Id: 7695083-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.88	250	250	100	252	101	90-110	1	20	mg/kg	01.23.20 18:30	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114309

Parent Sample Id: 649839-030

Matrix: Soil

MS Sample Id: 649839-030 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 649839-030 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.2	300	300	96	292	93	90-110	3	20	mg/kg	01.23.20 18:50	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114309

Parent Sample Id: 650005-001

Matrix: Soil

MS Sample Id: 650005-001 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 650005-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.75	250	265	105	259	102	90-110	2	20	mg/kg	01.23.20 20:23	

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

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

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

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



Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800  
77000-C

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. #:

Field billable Hrs.:

Company: Ettech Environmental Phone: (575)396-2378

Address: 3100 Plains Hwy. Fax: (575)396-1429

City: Lovington State: NM Zip: 88260

PM/Attn: Lance Crenshaw Email: pm@ettechenv.com

Project ID: Wrigley to Piper Pipeline PO#: PAA-C, Bryant

Invoice To: Ralph Tijerina, Goodnight Midstream Quote #:

Sampler Name: Circle One Event: Daily Weekly Monthly Quarterly  
Catalina Villa Semi-Annual Annual N/A

Sample # Sample ID Collect Date Collect Time Matrix Code Field Filtered Integrity OK (Y/N) Total # of containers

1 SFWW3B 1/22/2020 SOIL 1

2 SFEW12B 1/22/2020 SOIL 1

3 SFEW14B 1/22/2020 SOIL 1

4 SFEW17B 1/22/2020 SOIL 1

5

6

7

8

9

0

Reg. Program / Clean-up Sid

STATE for Certs & Regs

QA/QC Level & Certification

EDDS

COC & Labels

TAT Work Days = D Need results by: Time:

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

## ANALYSES REQUESTED

Example Volatiles by 8260  
TPH 8015M  
BTEX  
CI

# Cont Lab Only:

Hold Sample (CALL) Run PAH on Highest TPH Only If

REMARKS

Matrix Type Codes

Preservative Type Codes

Container Type Codes

Lab Use Only

YES NO N/A

38A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330  
ITS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099  
Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.  
Revision Date: Nov 12, 2009

## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental &amp; Safety Solution, I

Date/ Time Received: 01.23.2020 11.15.00 AM

Work Order #: 650005

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 01.23.2020

Checklist reviewed by:



Jessica Kramer

Date: 01.23.2020





# Certificate of Analysis Summary 650006

## Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Wrigley to Piper Pipeline

Project Id:

Date Received in Lab: Thu Jan-23-20 11:15 am

Contact: Joel Lowry

Report Date: 24-JAN-20

Project Location:

Project Manager: Jessica Kramer

<b>Analysis Requested</b>	<b>Lab Id:</b>	650006-001					
	<b>Field Id:</b>	EW15B					
	<b>Depth:</b>						
	<b>Matrix:</b>	SOIL					
	<b>Sampled:</b>	Dec-30-19 00:00					
<b>Chloride by EPA 300</b>	<b>Extracted:</b>	Jan-23-20 17:00					
	<b>Analyzed:</b>	Jan-23-20 21:29					
	<b>Units/RL:</b>	mg/kg RL					
Chloride		<5.00 5.00					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
 The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
 XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
 Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant

# **Analytical Report 650006**

**for**  
**Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**  
**Wrigley to Piper Pipeline**

**24-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



24-JAN-20

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **650006**  
**Wrigley to Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 650006. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 650006 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 650006****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley to Piper Pipeline

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
EW15B	S	12-30-19 00:00		650006-001



## CASE NARRATIVE

***Client Name: Etech Environmental & Safety Solution, Inc***

***Project Name: Wrigley to Piper Pipeline***

Project ID:

Work Order Number(s): 650006

Report Date: 24-JAN-20

Date Received: 01/23/2020

---

**Sample receipt non conformances and comments:**

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**Sample receipt non conformances and comments per sample:**

None



## Certificate of Analytical Results 650006



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wrigley to Piper Pipeline

Sample Id: **EW15B**  
Lab Sample Id: 650006-001

Matrix: Soil  
Date Collected: 12.30.19 00.00

Date Received: 01.23.20 11.15

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.23.20 17.00

Basis: Wet Weight

Seq Number: 3114309

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.23.20 21.29	U	1





## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



**Etech Environmental & Safety Solution, Inc**  
Wrigley to Piper Pipeline

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114309

MB Sample Id: 7695083-1-BLK

Matrix: Solid

LCS Sample Id: 7695083-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

LCSD Sample Id: 7695083-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.88	250	250	100	252	101	90-110	1	20	mg/kg	01.23.20 18:30	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114309

Parent Sample Id: 649839-030

Matrix: Soil

MS Sample Id: 649839-030 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 649839-030 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.2	300	300	96	292	93	90-110	3	20	mg/kg	01.23.20 18:50	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114309

Parent Sample Id: 650005-001

Matrix: Soil

MS Sample Id: 650005-001 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 650005-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.75	250	265	105	259	102	90-110	2	20	mg/kg	01.23.20 20:23	

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

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

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

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



Houston: 4143 Greenbush Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 1 of 1

Company: Elect Environmental

Address: 3100 Plains Hwy. Phone: (575)396-2378

City: Lovington Fax: (575)396-1429

State: NM Zip: 88260

PM/Attn: Lance Crenshaw Email: pm@electenvy.com

Project ID: Wrightley to Piper Pipeline

Invoice To: Ralph Tijerina, Goodnight Midstream

Quote #:

Sample Name: Catalina Villa

Circle One Event: Daily Weekly Monthly Quarterly

Sample #

Sample ID

Collect Date

Collect Time

Matrix Code

Field Filtered

Integrity OK (Y/N)

Total # of Containers

Example Volatiles by 8260

TPH 8015M

BTEX

CS

GC GC GC

ANALYSES REQUESTED

GC GC GC

GC GC GC

GC GC GC

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LAB W.O. #:

Field billable Hrs:

TAT Work Days = D Need results by: Time:

Std (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

GC GC GC

GC GC GC

GC GC GC

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\* Container Type Codes

VA Amber ES Enco Sample

VC Clear TS TerraCore Sampler

VP Glass Amber AC Air Canister

GC Glass Amber TB Teller Bag

PA Plastic Amber ZB Zip Lock Bag

PC Plastic Clear PC Plastic Clear

Other

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal

4oz, 125 ml, 250 ml, 500 ml, 1L, Other

\*\* Preservative Type Codes

A. None E. HCL I. Ice

B. HNO<sub>3</sub> F. MeOH J. MCAA

H<sub>2</sub>SO<sub>4</sub> G. Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub> K. ZnAc<sub>2</sub>/NaOH

D. NaOH H. NaHSO<sub>4</sub> L. Asbc Acid/NaOH

O.

Matrix Type Codes

GW Ground Water S Soil/Sediment/Solid

WW Waste Water W Wipe

DW Drinking Water A Air

SW Surface Water O Oil

OW Ocean/Sea Water T Tissue

PL Product-Liquid U Urine

PS Product-Solid B Blood

Sl Sludge

Other

REMARKS

Lab Use Only

Non-Conformances found?

Samples intact upon arrival?

Received on Wet Ice?

Labelled with proper preservatives?

Received within holding time?

Custody seals intact?

VOCs rec'd w/o headspace?

Proper containers used?

pH verified acceptable, excd VOCs?

Received on time to meet HTS?

YES NO N/A

C.O.C. Serial #

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330

FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.

Revision Date: Nov 12, 2009

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Final 1.000

## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental &amp; Safety Solution, I

Date/ Time Received: 01.23.2020 11.15.00 AM

Work Order #: 650006

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 01.23.2020

Checklist reviewed by:



Jessica Kramer

Date: 01.23.2020



# Certificate of Analysis Summary 650305

## Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Wrigley to Piper Pipeline

Project Id:

Date Received in Lab: Mon Jan-27-20 08:00 am

Contact: Joel Lowry

Report Date: 28-JAN-20

Project Location:

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	650305-001					
	<i>Field Id:</i>	SFEW18					
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL					
	<i>Sampled:</i>	Jan-18-20 00:00					
Chloride by EPA 300	<i>Extracted:</i>	Jan-27-20 09:40					
	<i>Analyzed:</i>	Jan-27-20 11:20					
	<i>Units/RL:</i>	mg/kg RL					
Chloride		<4.95 4.95					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.9%

Jessica Kramer  
Project Assistant

# **Analytical Report 650305**

**for**  
**Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**

**Wrigley to Piper Pipeline**

**28-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)  
Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)





28-JAN-20

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **650305**  
**Wrigley to Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 650305. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 650305 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

---

**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 650305****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley to Piper Pipeline

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SFEW18	S	01-18-20 00:00		650305-001



## CASE NARRATIVE

***Client Name: Etech Environmental & Safety Solution, Inc***

***Project Name: Wrigley to Piper Pipeline***

Project ID:

Work Order Number(s): 650305

Report Date: 28-JAN-20

Date Received: 01/27/2020

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None



# Certificate of Analytical Results 650305



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **SFEW18**

Matrix: Soil

Date Received: 01.27.20 08.00

Lab Sample Id: 650305-001

Date Collected: 01.18.20 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 01.27.20 09.40

Basis: Wet Weight

Seq Number: 3114615

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	01.27.20 11.20	U	1



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



**Etech Environmental & Safety Solution, Inc**  
Wrigley to Piper Pipeline

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114615

MB Sample Id: 7695297-1-BLK

Matrix: Solid

LCS Sample Id: 7695297-1-BKS

Prep Method: E300P

Date Prep: 01.27.20

LCSD Sample Id: 7695297-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	257	103	258	103	90-110	0	20	mg/kg	01.27.20 09:50	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114615

Parent Sample Id: 650242-001

Matrix: Soil

MS Sample Id: 650242-001 S

Prep Method: E300P

Date Prep: 01.27.20

MSD Sample Id: 650242-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	108	253	370	104	369	103	90-110	0	20	mg/kg	01.27.20 10:27	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114615

Parent Sample Id: 650242-002

Matrix: Soil

MS Sample Id: 650242-002 S

Prep Method: E300P

Date Prep: 01.27.20

MSD Sample Id: 650242-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	127	248	384	104	382	103	90-110	1	20	mg/kg	01.27.20 12:00	

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

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

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

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





Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200  
Odessa: 12600 West 120 East Odessa, TX 79765 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 1 of 1

Company: Elect Environmental

Address: 3100 Plains Hwy.

City: Lovington

State: NM

PM/Attn: Lance Crenshaw

Project ID: Wrigley to Piper Pipeline

Invoice To: Ralph Tijerina, Goodnight Midstream

Sample Name: Catalina Villa

Circle One Event: Daily Weekly Monthly Quarterly

Collect Date: 1/18/2020

Collect Time: SOIL

Matrix Code: 1

Field Filtered: 1

Integrity OK (Y/N):

Total # of containers:

Example Volatiles by 8260

TPH 8015M

BTEX

C

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LAB W.O. #: 1050705

Field billable Hrs: Time:

TAT Work Days = D Need results by: Time:

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

GC GC GC

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**\* Container Type Codes**  
VA Vial Amber ES Encore Sampler  
VC Vial Clear TS TerraCore Sampler  
VP Vial Pre-preserved AC Air Canister  
GA Glass Amber TB Teller Bag  
GC Glass Clear ZB Zip Lock Bag  
PA Plastic Amber PC Plastic Clear  
Other

**\*\* Preservative Type Codes**  
A. None E. HCL I. Ice  
B. HNO<sub>3</sub> F. MeOH J. MCAA  
C. H<sub>2</sub>SO<sub>4</sub> G. Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> K. ZnAc/NaOH  
D. NaOH H. NaHSO<sub>4</sub> L. Aspic Acid/NaOH  
Other

**Matrix Type Codes**  
GW Ground Water S Soil/Sediment/Solid  
WW Waste Water W Wipe  
DW Drinking Water A Air  
SW Surface Water O Oil  
OW Ocean/Sea Water T Tissue  
PL Product/Liquid U Urine  
PS Product/Solid B Blood  
Other

**REMARKS**

**Lab Use Only**  
Non-Conformances found? YES NO N/A  
Samples intact upon arrival?  
Received on Wet lot?  
Labeled with proper preservative?  
Received within holding time?  
Custody seals intact?  
VOCs rec'd w/o headspace?  
Proper containers used?  
pH verified-acceptable, excl VOCs?  
Received on time to meet HTS?

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.

Revision Date: Nov 12, 2009



Client: Etech Environmental &amp; Safety Solution, I

Date/ Time Received: 01/27/2020 08:00:00 AM

Work Order #: 650305

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

#1 *Temperature of cooler(s)?	4.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 01/27/2020

Checklist reviewed by:

Jessica Kramer

Date: 01/27/2020



# Certificate of Analysis Summary 651246

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Wrigley to Piper Pipeline

Project Id:

Contact: Joel Lowry

Project Location:

Date Received in Lab: Tue Feb-04-20 11:45 am

Report Date: 06-FEB-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	651246-001	651246-002	651246-003	651246-004	651246-005	
	<i>Field Id:</i>	NW42A	NW43B	NW44B	NW45A	EWN2	
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Feb-03-20 12:55	Feb-03-20 12:20	Feb-03-20 11:12	Feb-03-20 10:20	Feb-03-20 09:45	
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Feb-05-20 16:00	Feb-05-20 16:00	Feb-05-20 16:00	Feb-05-20 16:00	Feb-05-20 16:00	
	<i>Analyzed:</i>	Feb-05-20 23:44	Feb-06-20 00:04	Feb-06-20 00:24	Feb-06-20 00:44	Feb-06-20 01:04	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402	<0.00401 0.00401	<0.00401 0.00401	
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Feb-04-20 13:10	Feb-04-20 13:10	Feb-04-20 13:10	Feb-04-20 13:10	Feb-04-20 13:10	
	<i>Analyzed:</i>	Feb-04-20 16:21	Feb-04-20 16:41	Feb-04-20 16:48	Feb-04-20 16:55	Feb-04-20 17:01	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		8.15 5.01	7.61 4.97	631 5.00	50.6 4.96	22.4 4.99	
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Feb-04-20 13:00	Feb-04-20 13:00	Feb-04-20 13:00	Feb-04-20 13:00	Feb-04-20 13:00	
	<i>Analyzed:</i>	Feb-04-20 17:50	Feb-04-20 18:09	Feb-04-20 18:29	Feb-04-20 18:48	Feb-04-20 19:07	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.9 49.9	<50.0 50.0	
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.9 49.9	<50.0 50.0	
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.9 49.9	<50.0 50.0	
Total TPH		<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.9 49.9	<50.0 50.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer  
Project Assistant

# **Analytical Report 651246**

**for**  
**Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**  
**Wrigley to Piper Pipeline**

**06-FEB-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



06-FEB-20

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **651246**  
**Wrigley to Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 651246. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 651246 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

**Jessica Kramer**

Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



**Sample Cross Reference 651246****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wrigley to Piper Pipeline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NW42A	S	02-03-20 12:55		651246-001
NW43B	S	02-03-20 12:20		651246-002
NW44B	S	02-03-20 11:12		651246-003
NW45A	S	02-03-20 10:20		651246-004
EWN2	S	02-03-20 09:45		651246-005





## CASE NARRATIVE

**Client Name:** *Etech Environmental & Safety Solution, Inc*

**Project Name:** *Wrigley to Piper Pipeline*

Project ID:  
Work Order Number(s): 651246

Report Date: 06-FEB-20  
Date Received: 02/04/2020

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3115685 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **NW42A**  
Lab Sample Id: 651246-001

Matrix: Soil  
Date Collected: 02.03.20 12.55

Date Received: 02.04.20 11.45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.04.20 13.10

Basis: Wet Weight

Seq Number: 3115594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.15	5.01	mg/kg	02.04.20 16.21		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.04.20 13.00

Basis: Wet Weight

Seq Number: 3115596

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.04.20 17.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.04.20 17.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.04.20 17.50	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.04.20 17.50	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	91	%	70-135	02.04.20 17.50		
o-Terphenyl	84-15-1	92	%	70-135	02.04.20 17.50		



# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **NW42A**  
 Lab Sample Id: 651246-001

Matrix: Soil  
 Date Collected: 02.03.20 12.55

Date Received: 02.04.20 11.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.05.20 16.00

Basis: Wet Weight

Seq Number: 3115685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.05.20 23.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.05.20 23.44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.05.20 23.44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.05.20 23.44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.05.20 23.44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.05.20 23.44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.05.20 23.44	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	80	%	70-130	02.05.20 23.44		
1,4-Difluorobenzene	540-36-3	113	%	70-130	02.05.20 23.44		



# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **NW43B**  
Lab Sample Id: 651246-002

Matrix: Soil  
Date Collected: 02.03.20 12.20

Date Received: 02.04.20 11.45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.04.20 13.10

Basis: Wet Weight

Seq Number: 3115594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.61	4.97	mg/kg	02.04.20 16.41		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.04.20 13.00

Basis: Wet Weight

Seq Number: 3115596

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.04.20 18.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.04.20 18.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.04.20 18.09	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.04.20 18.09	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	77	%	70-135	02.04.20 18.09		
o-Terphenyl	84-15-1	78	%	70-135	02.04.20 18.09		



# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **NW43B**  
 Lab Sample Id: 651246-002

Matrix: Soil  
 Date Collected: 02.03.20 12.20

Date Received: 02.04.20 11.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.05.20 16.00

Basis: Wet Weight

Seq Number: 3115685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.06.20 00.04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.06.20 00.04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.06.20 00.04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.06.20 00.04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.06.20 00.04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.06.20 00.04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.06.20 00.04	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	114	%	70-130	02.06.20 00.04		
4-Bromofluorobenzene	460-00-4	73	%	70-130	02.06.20 00.04		



# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **NW44B**  
Lab Sample Id: 651246-003

Matrix: Soil  
Date Collected: 02.03.20 11.12

Date Received: 02.04.20 11.45

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3115594

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 02.04.20 13.10

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	631	5.00	mg/kg	02.04.20 16.48		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3115596

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 02.04.20 13.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.04.20 18.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.04.20 18.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.04.20 18.29	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.04.20 18.29	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	74	%	70-135	02.04.20 18.29		
o-Terphenyl	84-15-1	74	%	70-135	02.04.20 18.29		





# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **NW44B**  
 Lab Sample Id: 651246-003

Matrix: Soil  
 Date Collected: 02.03.20 11.12

Date Received: 02.04.20 11.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.05.20 16.00

Basis: Wet Weight

Seq Number: 3115685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.06.20 00.24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.06.20 00.24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.06.20 00.24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.06.20 00.24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.06.20 00.24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.06.20 00.24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.06.20 00.24	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	81	%	70-130	02.06.20 00.24		
1,4-Difluorobenzene	540-36-3	121	%	70-130	02.06.20 00.24		



# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **NW45A**  
Lab Sample Id: 651246-004

Matrix: Soil  
Date Collected: 02.03.20 10.20

Date Received: 02.04.20 11.45

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.04.20 13.10

Basis: Wet Weight

Seq Number: 3115594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	50.6	4.96	mg/kg	02.04.20 16.55		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 02.04.20 13.00

Basis: Wet Weight

Seq Number: 3115596

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.04.20 18.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.04.20 18.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.04.20 18.48	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.04.20 18.48	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	75	%	70-135	02.04.20 18.48		
o-Terphenyl	84-15-1	75	%	70-135	02.04.20 18.48		



# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: **NW45A**  
 Lab Sample Id: 651246-004

Matrix: Soil  
 Date Collected: 02.03.20 10.20

Date Received: 02.04.20 11.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.05.20 16.00

Basis: Wet Weight

Seq Number: 3115685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.06.20 00.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.06.20 00.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.06.20 00.44	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.06.20 00.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.06.20 00.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.06.20 00.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.06.20 00.44	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
4-Bromofluorobenzene	460-00-4	85	%	70-130	02.06.20 00.44		
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.06.20 00.44		



# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: EWN2  
Lab Sample Id: 651246-005

Matrix: Soil  
Date Collected: 02.03.20 09.45

Date Received: 02.04.20 11.45

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3115594

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 02.04.20 13.10

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.4	4.99	mg/kg	02.04.20 17.01		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3115596

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Date Prep: 02.04.20 13.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.04.20 19.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.04.20 19.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.04.20 19.07	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.04.20 19.07	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1-Chlorooctane	111-85-3	73	%	70-135	02.04.20 19.07		
o-Terphenyl	84-15-1	74	%	70-135	02.04.20 19.07		



# Certificate of Analytical Results 651246



## Etech Environmental & Safety Solution, Inc, Midland, TX

### Wrigley to Piper Pipeline

Sample Id: EWN2  
Lab Sample Id: 651246-005

Matrix: Soil  
Date Collected: 02.03.20 09.45

Date Received: 02.04.20 11.45

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.05.20 16.00

Basis: Wet Weight

Seq Number: 3115685

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.06.20 01.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.06.20 01.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.06.20 01.04	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.06.20 01.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.06.20 01.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.06.20 01.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.06.20 01.04	U	1
<b>Surrogate</b>	<b>Cas Number</b>	<b>% Recovery</b>	<b>Units</b>	<b>Limits</b>	<b>Analysis Date</b>	<b>Flag</b>	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.06.20 01.04		
4-Bromofluorobenzene	460-00-4	86	%	70-130	02.06.20 01.04		



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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





**Etech Environmental & Safety Solution, Inc**  
Wrigley to Piper Pipeline

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115594

MB Sample Id: 7695923-1-BLK

Matrix: Solid

LCS Sample Id: 7695923-1-BKS

Prep Method: E300P

Date Prep: 02.04.20

LCSD Sample Id: 7695923-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	261	104	261	104	90-110	0	20	mg/kg	02.04.20 14:09	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115594

Parent Sample Id: 651214-004

Matrix: Soil

MS Sample Id: 651214-004 S

Prep Method: E300P

Date Prep: 02.04.20

MSD Sample Id: 651214-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	369	282	654	101	654	101	90-110	0	20	mg/kg	02.04.20 14:29	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115594

Parent Sample Id: 651214-005

Matrix: Soil

MS Sample Id: 651214-005 S

Prep Method: E300P

Date Prep: 02.04.20

MSD Sample Id: 651214-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	344	293	645	103	645	103	90-110	0	20	mg/kg	02.04.20 16:02	

**Analytical Method: TPH By SW8015 Mod**

Seq Number: 3115596

MB Sample Id: 7695964-1-BLK

Matrix: Solid

LCS Sample Id: 7695964-1-BKS

Prep Method: SW8015P

Date Prep: 02.04.20

LCSD Sample Id: 7695964-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	873	87	862	86	70-135	1	20	mg/kg	02.04.20 11:28	
Diesel Range Organics (DRO)	<15.0	1000	952	95	967	97	70-135	2	20	mg/kg	02.04.20 11:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		101		103		70-135	%	02.04.20 11:28
o-Terphenyl	79		96		88		70-135	%	02.04.20 11:28

**Analytical Method: TPH By SW8015 Mod**

Seq Number: 3115596

Matrix: Solid

MB Sample Id: 7695964-1-BLK

Prep Method: SW8015P

Date Prep: 02.04.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.04.20 10:51	

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

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

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

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



**Etech Environmental & Safety Solution, Inc**  
Wrigley to Piper Pipeline

**Analytical Method:** TPH By SW8015 Mod

Seq Number: 3115596

Parent Sample Id: 651190-002

Matrix: Soil

MS Sample Id: 651190-002 S

Prep Method: SW8015P

Date Prep: 02.04.20

MSD Sample Id: 651190-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	884	89	999	100	70-135	12	20	mg/kg	02.04.20 12:26	
Diesel Range Organics (DRO)	273	997	1070	80	1120	85	70-135	5	20	mg/kg	02.04.20 12:26	

**Surrogate**

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		113		70-135	%	02.04.20 12:26
o-Terphenyl	91		97		70-135	%	02.04.20 12:26

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 3115685

MB Sample Id: 7696077-1-BLK

Matrix: Solid

LCS Sample Id: 7696077-1-BKS

Prep Method: SW5030B

Date Prep: 02.05.20

LCSD Sample Id: 7696077-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.123	123	0.107	107	70-130	14	35	mg/kg	02.05.20 21:04	
Toluene	<0.000456	0.100	0.118	118	0.103	103	70-130	14	35	mg/kg	02.05.20 21:04	
Ethylbenzene	<0.000565	0.100	0.112	112	0.0968	97	70-130	15	35	mg/kg	02.05.20 21:04	
m,p-Xylenes	<0.00101	0.200	0.223	112	0.192	96	70-130	15	35	mg/kg	02.05.20 21:04	
o-Xylene	<0.000344	0.100	0.112	112	0.0958	96	70-130	16	35	mg/kg	02.05.20 21:04	

**Surrogate**

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		112		107		70-130	%	02.05.20 21:04
4-Bromofluorobenzene	70		89		85		70-130	%	02.05.20 21:04

**Analytical Method:** BTEX by EPA 8021B

Seq Number: 3115685

Parent Sample Id: 650969-021

Matrix: Soil

MS Sample Id: 650969-021 S

Prep Method: SW5030B

Date Prep: 02.05.20

MSD Sample Id: 650969-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.109	109	0.118	118	70-130	8	35	mg/kg	02.05.20 21:45	
Toluene	<0.000455	0.0998	0.0975	98	0.100	100	70-130	3	35	mg/kg	02.05.20 21:45	
Ethylbenzene	<0.000564	0.0998	0.0855	86	0.0871	87	70-130	2	35	mg/kg	02.05.20 21:45	
m,p-Xylenes	<0.00101	0.200	0.168	84	0.171	86	70-130	2	35	mg/kg	02.05.20 21:45	
o-Xylene	<0.000344	0.0998	0.0872	87	0.0886	89	70-130	2	35	mg/kg	02.05.20 21:45	

**Surrogate**

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		105		70-130	%	02.05.20 21:45
4-Bromofluorobenzene	90		92		70-130	%	02.05.20 21:45

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

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

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

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

[illegible]



# Certificate of Analysis Summary 651688

## Etech Environmental & Safety Solution, Inc, Midland, TX

**Project Name:** Wringley to Piper Pipeline

**Project Id:**
**Contact:** Joel Lowry

**Project Location:**
**Date Received in Lab:** Fri Feb-07-20 11:44 am

**Report Date:** 10-FEB-20

**Project Manager:** Jessica Kramer

<b>Analysis Requested</b>	<b>Lab Id:</b>	651688-001					
	<b>Field Id:</b>	NW44C					
	<b>Depth:</b>						
	<b>Matrix:</b>	SOIL					
	<b>Sampled:</b>	Feb-06-20 00:00					
<b>Chloride by EPA 300</b>	<b>Extracted:</b>	Feb-07-20 12:30					
	<b>Analyzed:</b>	Feb-07-20 13:15					
	<b>Units/RL:</b>	mg/kg RL					
Chloride		<5.01 5.01					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.9%

Jessica Kramer  
Project Assistant

# **Analytical Report 651688**

**for**  
**Etech Environmental & Safety Solution, Inc**

**Project Manager: Joel Lowry**

**Wringley to Piper Pipeline**

**10-FEB-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)





10-FEB-20

Project Manager: **Joel Lowry**  
**Etech Environmental & Safety Solution, Inc**  
P.O. Box 8469  
Midland, TX 79708

Reference: XENCO Report No(s): **651688**  
**Wringley to Piper Pipeline**  
Project Address:

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 651688. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 651688 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

---

**Jessica Kramer**  
Project Assistant

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



**Sample Cross Reference 651688****Etech Environmental & Safety Solution, Inc, Midland, TX**

Wringley to Piper Pipeline

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
NW44C	S	02-06-20 00:00		651688-001



## CASE NARRATIVE

**Client Name:** *Etech Environmental & Safety Solution, Inc*

**Project Name:** *Wringley to Piper Pipeline*

Project ID:

Work Order Number(s): 651688

Report Date: 10-FEB-20

Date Received: 02/07/2020

---

**Sample receipt non conformances and comments:**

---

**Sample receipt non conformances and comments per sample:**

None



## Certificate of Analytical Results 651688



### Etech Environmental & Safety Solution, Inc, Midland, TX

#### Wringley to Piper Pipeline

Sample Id: **NW44C**  
Lab Sample Id: 651688-001

Matrix: Soil  
Date Collected: 02.06.20 00.00

Date Received: 02.07.20 11.44

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

% Moisture:

Analyst: SPC

Date Prep: 02.07.20 12.30

Basis: Wet Weight

Seq Number: 3115971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	02.07.20 13.15	U	1



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



**Etech Environmental & Safety Solution, Inc**  
Wringley to Piper Pipeline

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115971

MB Sample Id: 7696233-1-BLK

Matrix: Solid

LCS Sample Id: 7696233-1-BKS

Prep Method: E300P

Date Prep: 02.07.20

LCSD Sample Id: 7696233-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	254	102	255	102	90-110	0	20	mg/kg	02.07.20 13:02	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115971

Parent Sample Id: 651582-020

Matrix: Soil

MS Sample Id: 651582-020 S

Prep Method: E300P

Date Prep: 02.07.20

MSD Sample Id: 651582-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.19	249	260	103	260	103	90-110	0	20	mg/kg	02.07.20 14:55	

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115971

Parent Sample Id: 651688-001

Matrix: Soil

MS Sample Id: 651688-001 S

Prep Method: E300P

Date Prep: 02.07.20

MSD Sample Id: 651688-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.57	251	259	102	259	102	90-110	0	20	mg/kg	02.07.20 13:22	

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

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

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

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



Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200  
 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800

# CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O. #: 10511088

Field billable Hrs: 10511088

Company: Ettech Environmental  
 Address: 3100 Plains Hwy.  
 City: Lovington  
 State: NM  
 Zip: 88260

Phone: (575)396-2378  
 Fax: (575)396-1429

PM/Attn: Lance Crenshaw  
 Email: dm@etechnv.com

Project ID: Wrigley to Piper Pipeline  
 PO#: PAA-C. Bryant

Invoice To: Ralph Tijerina, Goodnight Midstream  
 Quote #:

Sample Name: Catelina Villa  
 Circle One Event: Daily Weekly Monthly Quarterly  
 Semi-Annual Annual N/A

Sample #

Sample ID

Collect Date

Collect Time

Matrix Code

Field Filtered

Integrity OK (Y/N)

Total # of containers

Example Volatiles by 8260

TPH 8015M

BTEX

CI

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TAT Work Days = D Need results by: ASAP Time: 10511088

Sid (5-7D) 5Hrs 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

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Container Type Codes

VA Vial Amber

VC Vial Clear

VP Vial Pre-preserved

GA Glass Amber

GC Glass Clear

PA Plastic Amber

PC Plastic Clear

Other

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal

40ml, 125 ml, 250 ml, 500 ml, 1L, Other

\*\* Preservative Type Codes

A. None

B. HNO<sub>3</sub>

C. H<sub>2</sub>SO<sub>4</sub>

D. NaOH

E. HCL

F. MeOH

G. Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

H. NaHSO<sub>4</sub>

I. Ice

J. MCAA

K. ZnAc&NaOH

L. Aspic Acid&NaOH

Other

Matrix Type Codes

GW Ground Water

DW Waste Water

SW Surface Water

OW Ocean/Sea Water

PL Product-Liquid

PS Product-Solid

SL Sludge

Other

Soil/Sediment/Solid

W Wipe

A Air

O Oil

T Tissue

U Urine

B Blood

REMARKS

Lab Use Only

YES NO N/A

Non-Conformances found?

Samples intact upon arrival?

Received on Wal log?

Labelled with proper preservativ?

Received within holding time?

Custody seals intact?

VOCs rec'd w/o headspace?

Proper containers used?

pH verified-acceptable, excl VOCs?

Received on time to meet HTs?

C.O.C. Serial #

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.

Revision Date: Nov 12, 2009

Page 9 of 10

Final 1.000



## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental &amp; Safety Solution, I

Date/ Time Received: 02.07.2020 11.44.00 AM

Work Order #: 651688

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 02.07.2020

Checklist reviewed by:



Jessica Kramer

Date: 02.10.2020

## **Appendix D**

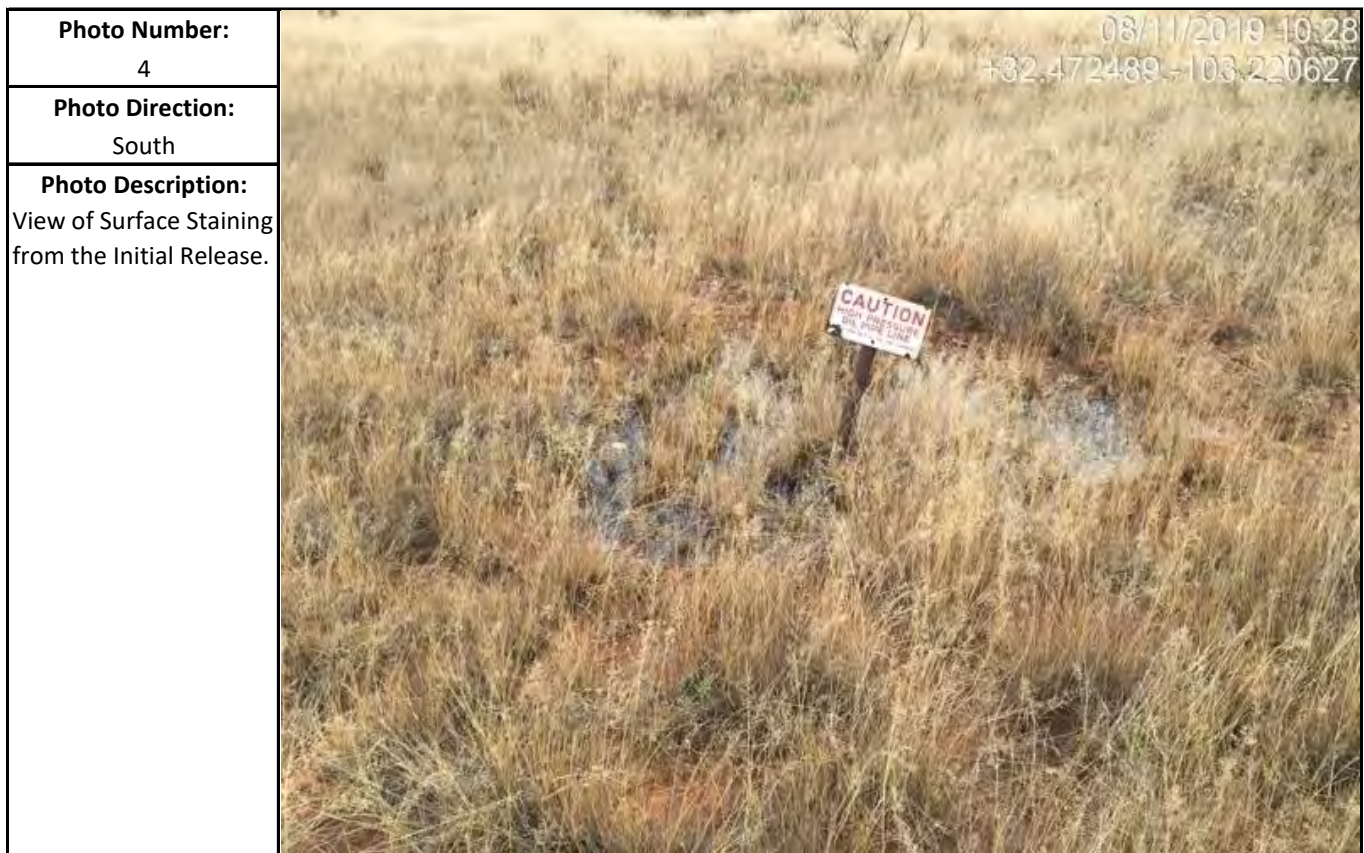
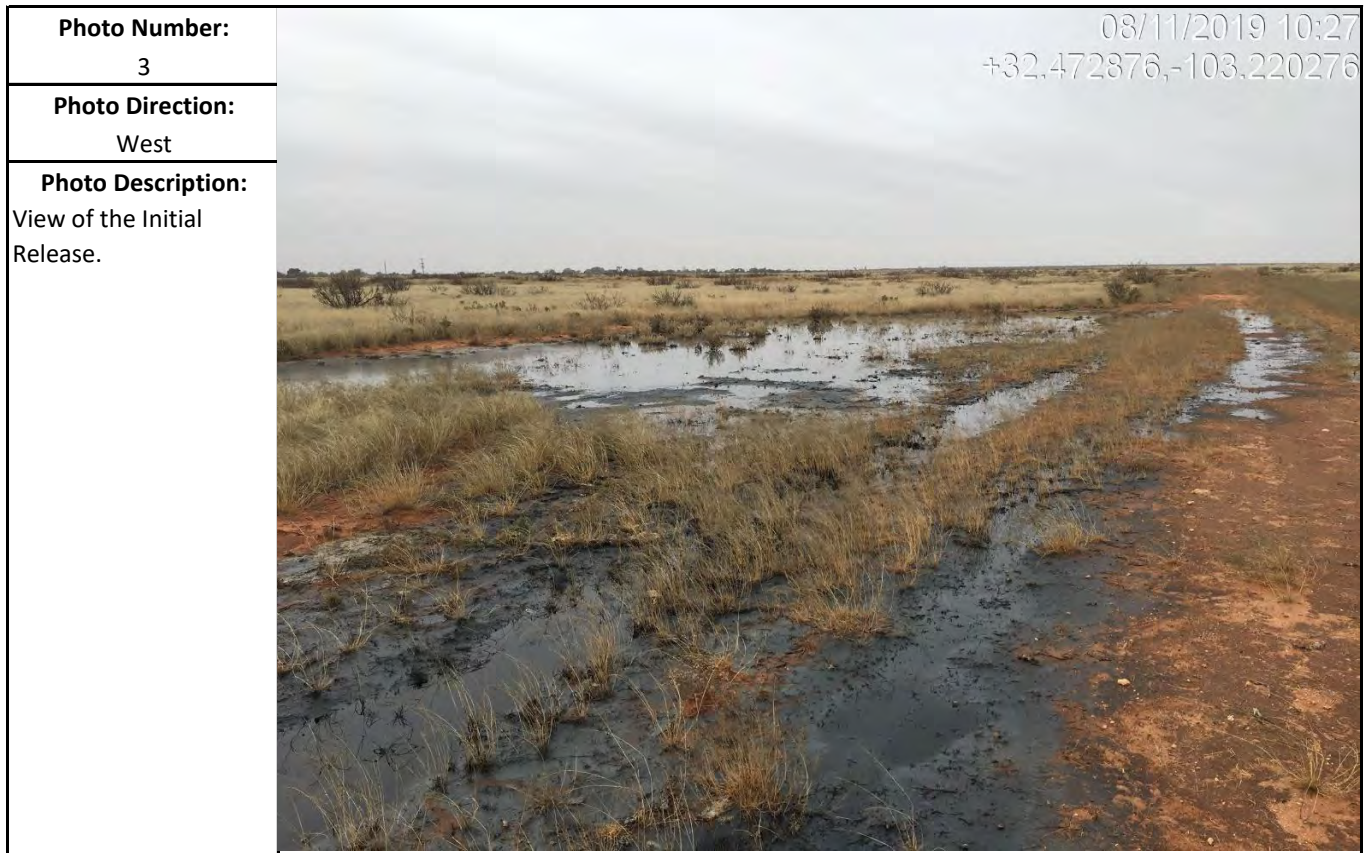
### **Photographic Log**

## Photographic Log





## Photographic Log



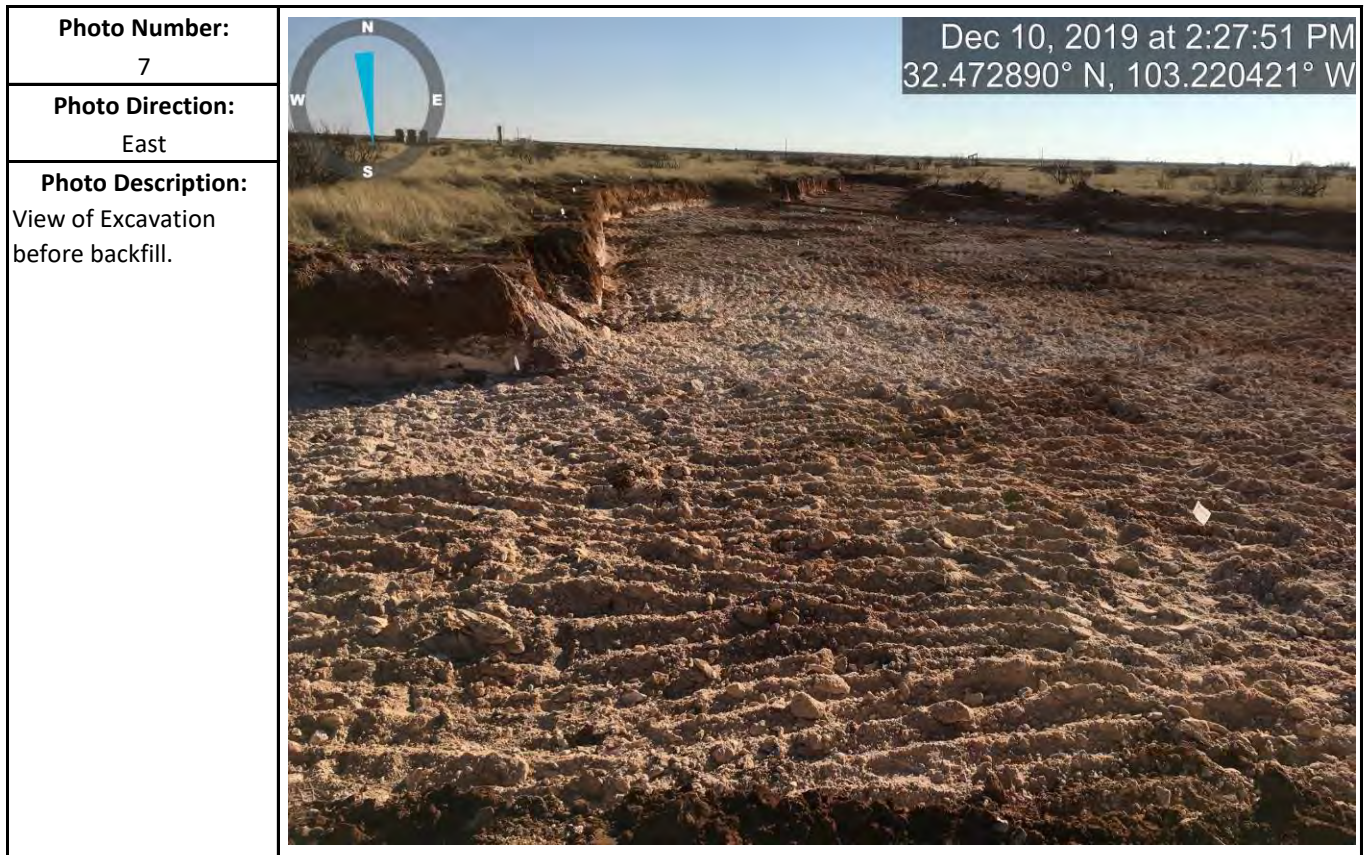


## Photographic Log



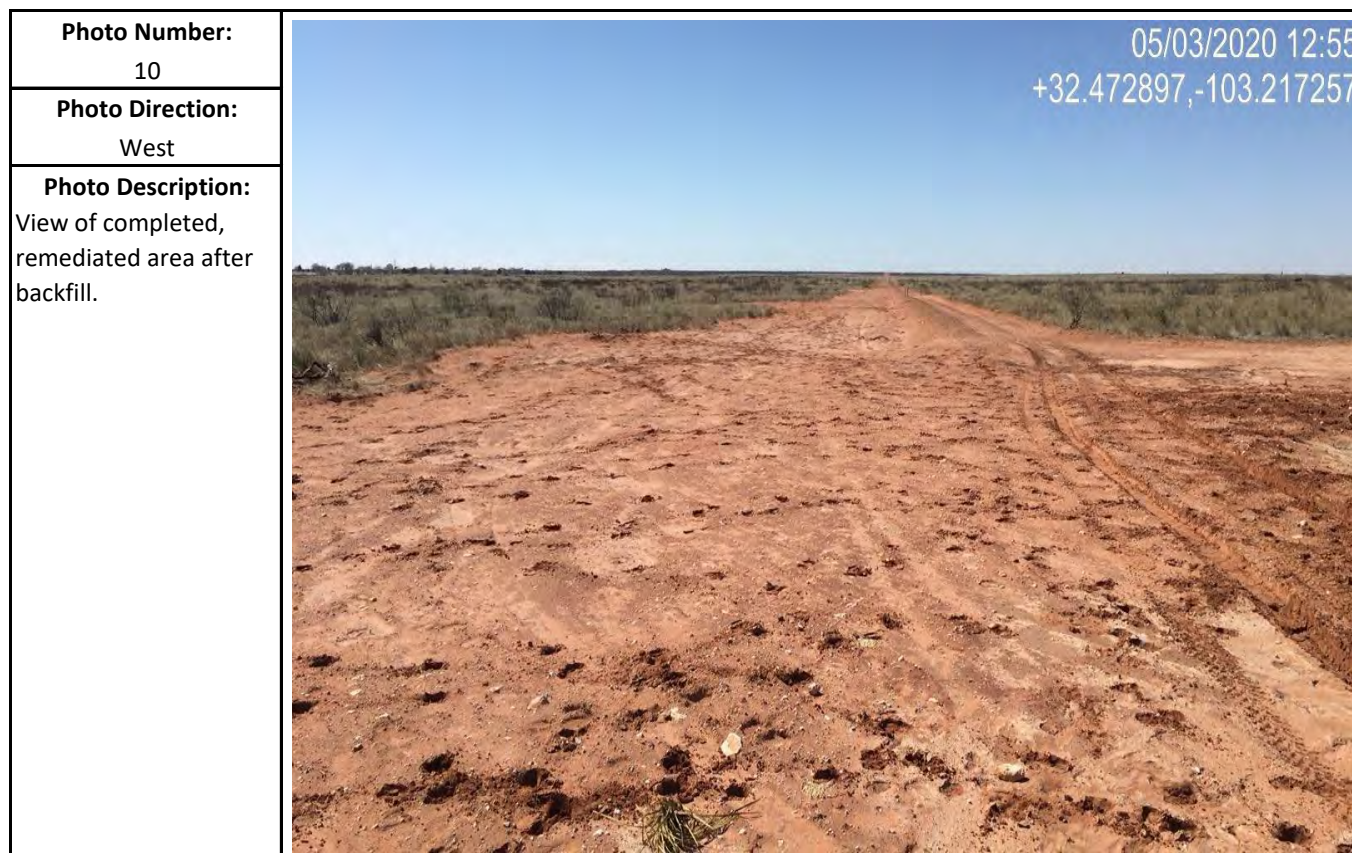
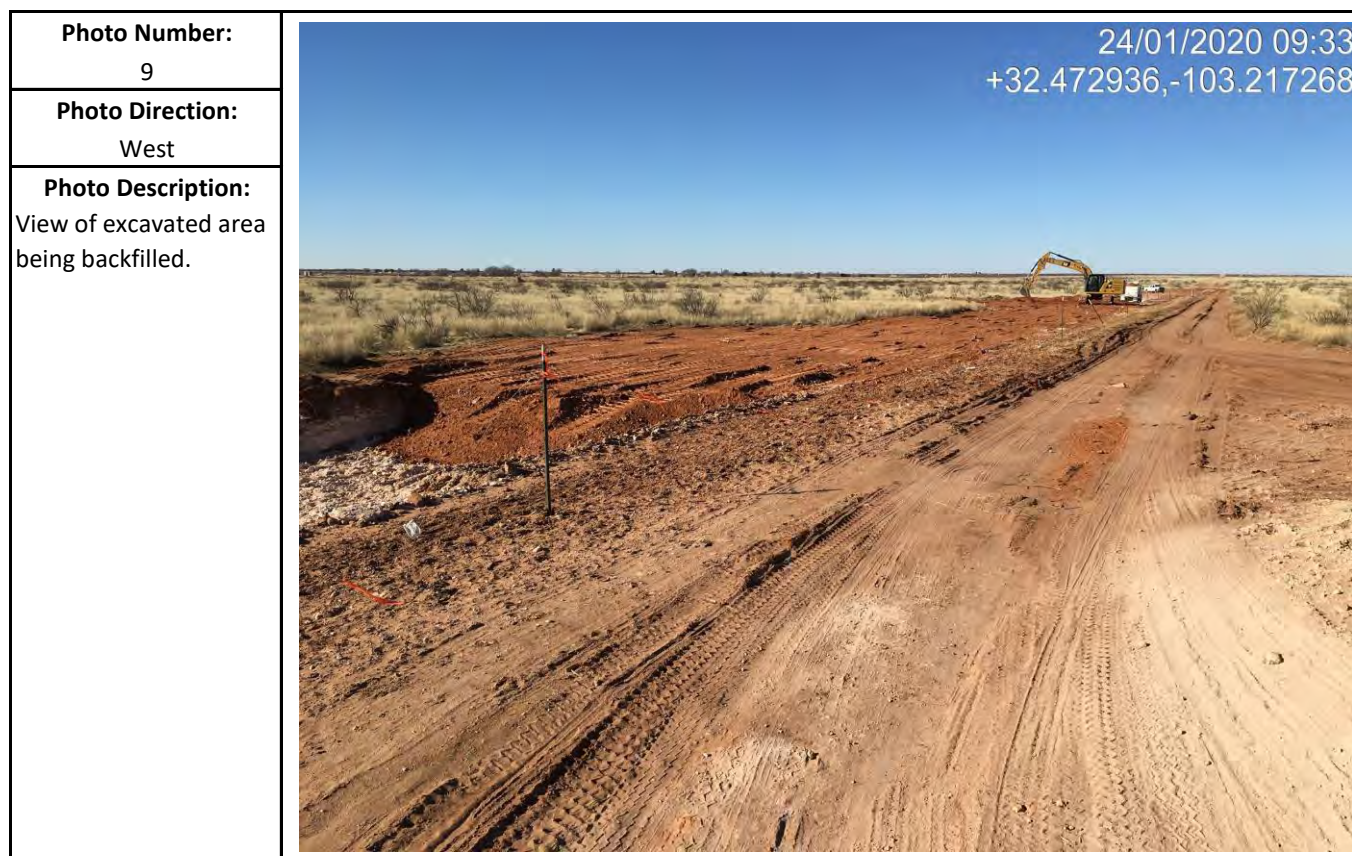


## Photographic Log







## Photographic Log





## Photographic Log

<b>Photo Number:</b> 11	
<b>Photo Direction:</b> Northeast	
<b>Photo Description:</b> View of completed, remediated area after backfill.	

<b>Photo Number:</b> 12	
<b>Photo Direction:</b> North	
<b>Photo Description:</b> View of completed, remediated area after backfill.	