District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

# Release Notification

## Responsible Party

| | |
|---|---|
| Responsible Party EOG Resources | OGRID 7377 |
| Contact Name Todd Wells | Contact Telephone (432) 686-3613 |
| Contact email Todd_Wells@eogresources.com | Incident # *(assigned by OCD)* |
| Contact mailing address 5509 Champions Drive Midland, TX 79706 | |

## Location of Release Source

Latitude 32.178747° Longitude -103.535832°
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name Falcon Riser Pipeline | Site Type Reuse Water Pipeline |
| Date Release Discovered 6/23/20 | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| A | 35 | 24S | 33E | Lea |

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

## Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

| | | |
|---|---|---|
| ☐ Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| ☒ Reuse Water | Volume Released (bbls) 6 | Volume Recovered (bbls) 1 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☒ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release: While pumping from pit to pit a closed valve caused the reuse water line to pressure up. The high pressure resulted in a release of 6 bbls of reuse water at the Falcon Riser with 1 bbls recovered.

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Page 2

State of New Mexico
Oil Conservation Division

| | |
|---|---|
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| Facility ID | |
| Application ID | |

| | |
|---|---|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br>☐ Yes ☒ No | If YES, for what reason(s) does the responsible party consider this a major release? |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? | |

## Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

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

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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: Todd Wells Title: Environmental Specialist

Signature: Todd Wells Date: 12-7-20

email: Todd_Wells@eogresources.com Telephone: (432) 686-3613

**OCD Only**

Received by: Date:

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

# Site Assessment/Characterization

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

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

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

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

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

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

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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: _____ Title: _____

Signature:_____ Date: _____

email: _____ Telephone: _____

**OCD Only**

Received by: _____ Date: _____

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

# Remediation Plan

**Remediation Plan Checklist**: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only**: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

**OCD Only**

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

# Closure

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

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

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

**OCD Only**

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

# SITE INFORMATION

## Report Type: Closure Report - NRM2035146148

| General Site Information: | | | | | | |
|---|---|---|---|---|---|---|
| ***Site:*** | **Falcon Riser Pipeline** | | | | | |
| ***Company:*** | **EOG Resources** | | | | | |
| ***Section, Township and Range*** | **Unit A** | **Sec. 35** | **T 24S** | **R 33E** | | |
| ***County:*** | **Eddy County** | | | | | |
| ***GPS:*** | **32.17875** | | | **-103.535832** | | |

| Release Data: | |
|---|---|
| *Date Released:* | 6/23/2020 |
| *Type Release:* | High Pressure Valve |
| *Source of Contamination:* | Produced Water |
| *Fluid Released:* | 6 bbls PW |
| *Fluids Recovered:* | 1bbls |

| Official Communication: | | | |
|---|---|---|---|
| *Name:* | Todd Wells | | Mike Carmona |
| *Company:* | EOG Reources | | Tetra Tech |
| *Address:* | 5509 Champions Dr | | 901 West Wall Street |
| | | | Suite 100 |
| *City:* | Midland Texas, 79706 | | Midland, Texas |
| *Phone number:* | 432-686-7016 | | (432) 687-8121 |
| *Fax:* | | | |
| *Email:* | todd_well@eogresources.com | | mike.carmona@tetratech.com |

| Site Characterization | |
|---|---|
| ***Depth to Groundwater:*** | *17.56' below surface* |
| ***Karst Potential:*** | *Low* |

| Recommended Remedial Action Levels (RRALs) | | | |
|---|---|---|---|
| ***Benzene*** | ***Total BTEX*** | ***TPH (GRO+DRO+MRO)*** | ***Chlorides*** |
| *10 mg/kg* | *50 mg/kg* | *100 mg/kg* | *600* |

TETRA TECH

December 29, 2020

Environmental Specialist
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Closure Report for the EOG Resources, Falcon Riser Spill, Unit A, Section 35, Township 24 South, Range 33 East, Lea County, New Mexico. NRM2035146148**

Oil Conservation Division:

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources (EOG) to assess and remediate a release that occurred at the EOG Resources, Falcon Riser Spill, Unit A, Section 35, Township 24 South, Range 33 East, Lea County, New Mexico (Site). The site coordinates are 32.178747º, -103.535832º. The site location is shown on Figures 1 and 2.

**Background**

According to the State of New Mexico, C-141 Initial Report, the release was discovered on June 23, 2020, and released approximately 6 barrels of produced water due to a valve having high pressure. A total of one (1) barrels of the released fluids were recovered. The release occurred in a pasture, impacting an area measuring approximately 85' x 60'. The C-141 form is included in Appendix A.

**Site Characterization**

A site characterization was performed for the site. No watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, wetlands, incorporated municipal boundaries, subsurface mines floodplains are located within the specified distances. The site is in a low karst potential area. The nearest well is listed in the USGS National Water Information Database website in Section 25, approximately 1.35 miles northeast of the site, and has a reported depth to groundwater of 17.56 feet below ground surface. Site characterization data is included in Appendix B.

**Regulatory**

A risk-based evaluation was performed for the site following the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). The proposed RRAL for TPH is 100 mg/kg

Tetra Tech
901 West Wall Street, Suite 100, Midland, TX 79701
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

TETRA TECH

(GRO+DRO+MRO) based on the site characterization. Additionally, based on the site characterization, the proposed RRAL for chlorides is 600 mg/kg.

**Soil Assessment and Analytical Results**

On October 19, 2020, Tetra Tech personnel were onsite to evaluate and sample the release area. A total of four (4) trenches (T-1 through T-4) were installed to total depths ranging from surface to 6.0' below surface. All samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The trench locations are shown on Figure 3.

Referring to Table 1, the samples analyzed did not show benzene, total BTEX, and TPH concentrations above the remediation threshold. The areas of T-1 through T-4 showed chloride concentrations above 600 mg/kg that were vertically defined at total depths ranging from surface to 4.5'-5.0' below surface. The chloride concentrations ranged from 90.6 mg/kg to 9,550 mg/kg.

**Remediation and Reclamation Activities**

Based on the soil assessment results, Tetra Tech personnel were onsite on November 18, 2020, to collect confirmation samples. The impacted areas were excavated to total depths ranging from 3.0'-4.5' below surface, as shown on Figure 4 and Table 2.

A total of ten (10) bottom hole samples (BH-1 through BH-10) and nine (9) sidewall samples (SW-1 through SW-9) were collected to ensure proper removal of the contaminated soils. The samples were submitted to the laboratory to be analyzed for TPH method 8015 extended, BTEX method 8021B, and Chloride by EPA Method 300.0. The sampling results are summarized in Table 2. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The excavation depths and sample locations are shown in Figure 4.

Referring to Table 2, none of the samples collected showed TPH, benzene, and total BTEX above the laboratory reporting limits. Additionally, all samples collected showed chloride concentrations below the remediation standards and the RRALs.

Approximately 257 cubic yards of material were excavated and transported offsite for proper disposal. The areas were then backfilled with clean material to surface grade.

**Conclusion**

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

Respectfully submitted,
TETRA TECH

Mike Carmona,
Project Manager

# Figures


SITE LOCATION

N
W
E
S

0 2.5 5 Miles

Approximate Scale in Miles

Source: ESRI Basemap - Streets, 2020.

OVERVIEW MAP
FALCON RISER PIPELINE SPILL
Property Located at coordinates 32.178747°, -103.535832°
LEA COUNTY, NEW MEXICO

eog resources

Project #:
212C-MD-02330

FIGURE
1

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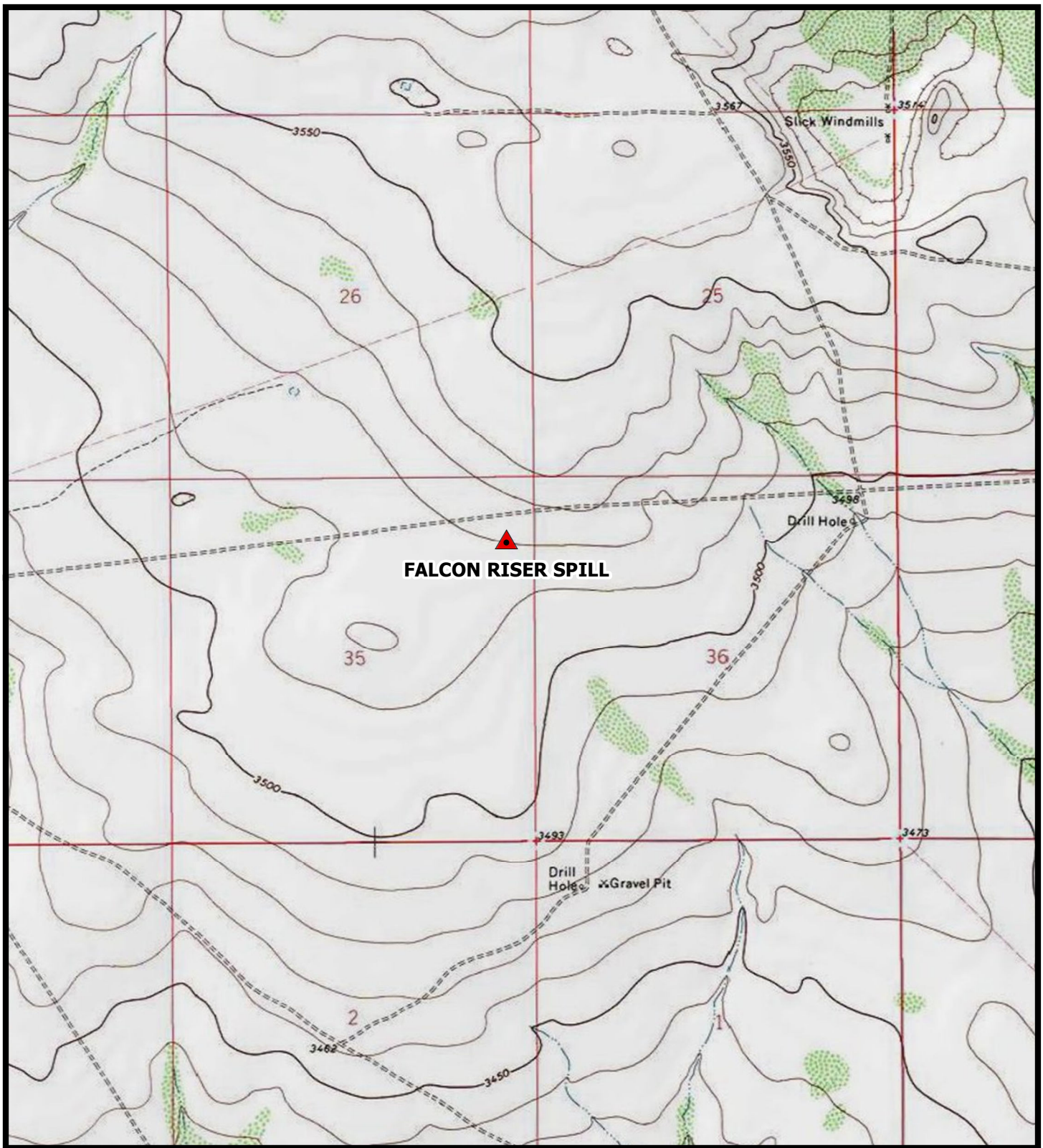


SITE LOCATION

N
W
E
S

0 1,000 2,000 Feet

Approximate Scale in Miles

Source: National Geographic Society, i-cubed, USA Topo Maps, 2013.

TOPOGRAPHIC MAP
FALCON RISER PIPELINE SPILL
Property Located at coordinates 32.178747°, -103.535832°
LEA COUNTY, NEW MEXICO

eog resources

Project #: 212C-MD-02330

FIGURE 2

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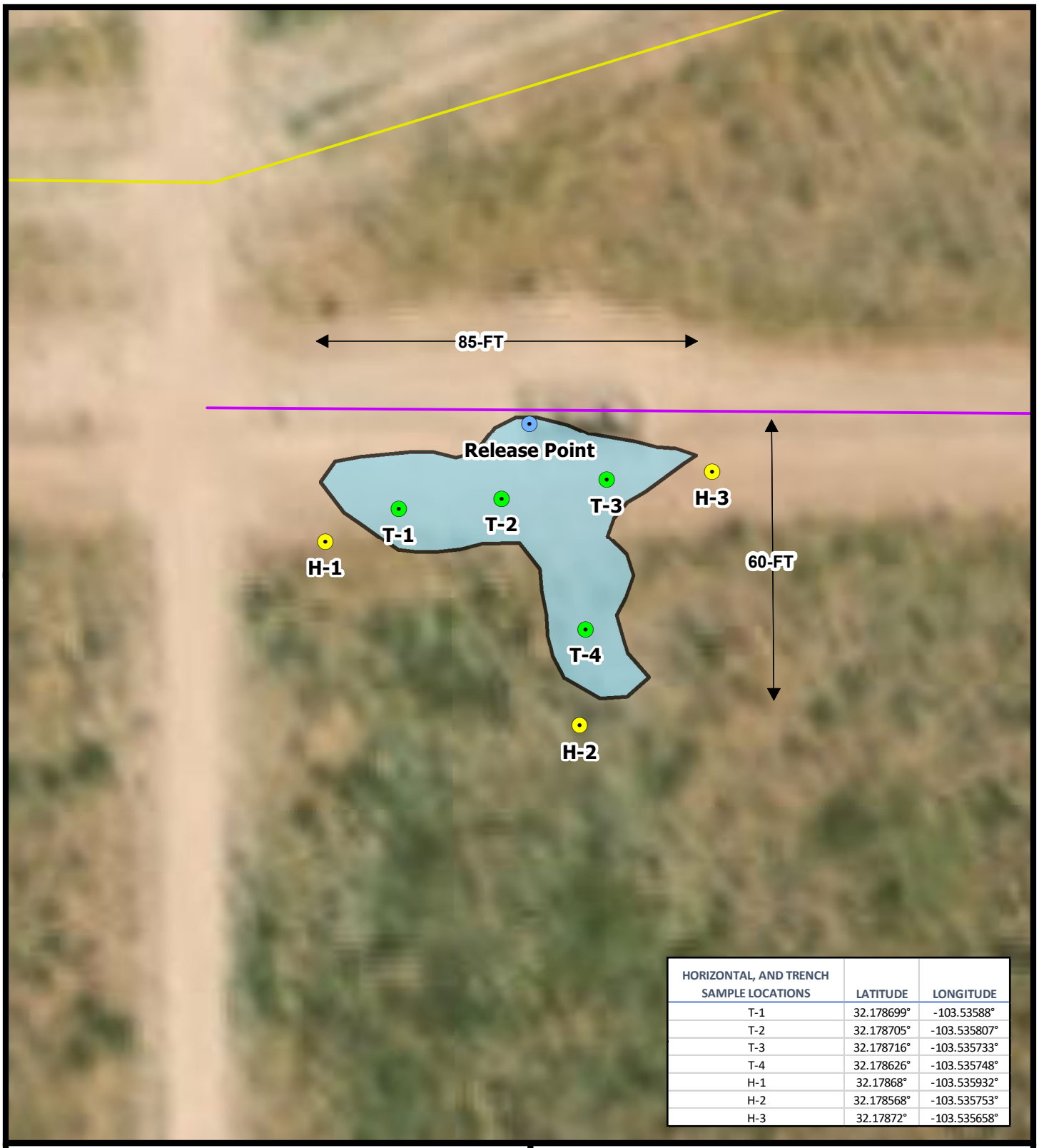


| HORIZONTAL, AND TRENCH SAMPLE LOCATIONS | LATITUDE | LONGITUDE |
|---|---|---|
| T-1 | 32.178699° | -103.53588° |
| T-2 | 32.178705° | -103.535807° |
| T-3 | 32.178716° | -103.535733° |
| T-4 | 32.178626° | -103.535748° |
| H-1 | 32.17868° | -103.535932° |
| H-2 | 32.178568° | -103.535753° |
| H-3 | 32.17872° | -103.535658° |

HORIZONTAL SAMPLE LOCATION
TRENCH SAMPLE LOCATION
RELEASE POINT
HIGH PRESSURE GAS LINE
RISER POLY LINE
SPILL AREA

N
W
E
S

0 15 30 Feet
Approximate Scale in Miles

Source: ESRI Basemap - Imagery, 2019.

SPILL ASSESSMENT MAP
FALCON RISER PIPELINE SPILL
Property Located at coordinates 32.178747°, -103.535832°
LEA COUNTY, NEW MEXICO

eog resources

Project #:
212C-MD-02330

FIGURE
3

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BH BOTTOMHOLE SAMPLE LOCATIONS

SIDEWALL DESIGNATIONS

RELEASE POINT

HIGH PRESSURE GAS LINE

RISER POLY LINE

3' EXCAVATED DEPTH AREA

4'-4.5' EXCAVATED DEPTH AREA

Source: ESRI Basemap - Imagery, 2019.

N W E S

0 15 30 Feet

Approximate Scale in Miles

EXCAVATION AREA AND DEPTH MAP
FALCON RISER PIPELINE SPILL
Property Located at coordinates 32.178747°, -103.535832°
LEA COUNTY, NEW MEXICO

eog resources

Project #:
212C-MD-02330

FIGURE
4

C:\GIS\EOG Resources\212C-MD-02330_FALCONRISER\212C-MD-02330_FALCONRISER_FIG4.mxd 11/24/2020 jpell.peters

# Tables

# Table 1
## EOG
## Falcon Riser Pipeline
## Lea County, New Mexico

| Sample ID | Sample Date | Sample Depth (ft) | Soil Status | | TPH (mg/kg) | | | | Benzene (mg/kg) | Toluene (mg/kg) | Ethlybenzene (mg/kg) | Xylene (mg/kg) | Total BTEX (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | In-Situ | Removed | GRO | DRO | MRO | Total | | | | | | |
| T-1 | 10/19/2020 | 0-1 | | X | <50.0 | <50.0 | <50.0 | <50.0 | 0.0898 | 0.0925 | 0.0879 | 0.273 | 0.544 | **4,880** |
| | " | 1 | | X | - | - | - | - | - | - | - | - | - | **9,550** |
| | " | 2 | | X | - | - | - | - | - | - | - | - | - | **3,080** |
| | " | 3 | | X | - | - | - | - | - | - | - | - | - | **2,850** |
| | " | 4 | X | | - | - | - | - | - | - | - | - | - | 526 |
| | " | 4.5-5 | X | | - | - | - | - | - | - | - | - | - | 345 |
| | | 5.5 | X | | - | - | - | - | - | - | - | - | - | 90.6 |
| T-2 | 10/19/2020 | 0-1 | | X | <49.8 | <49.8 | <49.8 | <49.8 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | **4,810** |
| | " | 1 | | X | - | - | - | - | - | - | - | - | - | **7,960** |
| | " | 2 | | X | - | - | - | - | - | - | - | - | - | **5,800** |
| | " | 3 | | X | - | - | - | - | - | - | - | - | - | **4,760** |
| | " | 4 | | X | - | - | - | - | - | - | - | - | - | **2,140** |
| | " | 4.5-5 | X | | - | - | - | - | - | - | - | - | - | 510 |
| | " | 5.5 | X | | - | - | - | - | - | - | - | - | - | 239 |
| T-3 | 10/19/2020 | 0-1 | | X | <50.0 | <50.0 | <50.0 | <50.0 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | **4,290** |
| | " | 1 | | X | - | - | - | - | - | - | - | - | - | **1,910** |
| | " | 2 | | X | - | - | - | - | - | - | - | - | - | **3,380** |
| | " | 3 | | X | - | - | - | - | - | - | - | - | - | **6,870** |
| | " | 4 | | X | - | - | - | - | - | - | - | - | - | **4,670** |
| | " | 4.5-5 | | X | - | - | - | - | - | - | - | - | - | **1,860** |
| | " | 5.5 | X | | - | - | - | - | - | - | - | - | - | 583 |
| | " | 6 | X | | - | - | - | - | - | - | - | - | - | 232 |
| T-4 | 10/19/2020 | 0-1 | | X | <50.0 | <50.0 | <50.0 | <50.0 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | **4,960** |
| | " | 1 | | X | - | - | - | - | - | - | - | - | - | **4,800** |
| | " | 2 | X | | - | - | - | - | - | - | - | - | - | 290 |
| | " | 2.5 | X | | - | - | - | - | - | - | - | - | - | 206 |
| **Horizontal-1** | 10/19/2020 | 0-1 | X | | <49.9 | <49.9 | <49.9 | <49.9 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | 48.6 |
| **Horizontal-2** | 10/19/2020 | 0-1 | X | | <49.8 | <49.8 | <49.8 | <49.8 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | 13.3 |
| **Horizontal-3** | 10/19/2020 | 0-1 | X | | <50.0 | <50.0 | <50.0 | <50.0 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | 37.3 |

( - ) Not Analyzed

Excavated

# Table 2
## EOG Resources
## Falcon Riser Pipeline
## Lea County, New Mexico

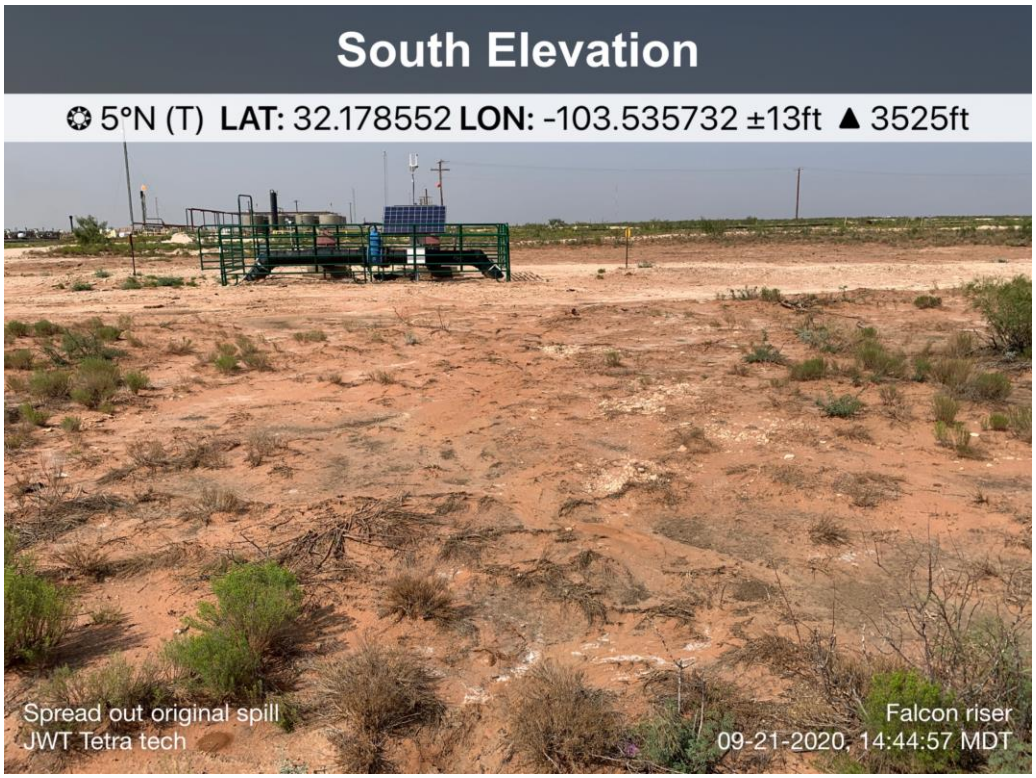
| Sample ID | Sample Date | Excavtion Depth (ft) | Soil Status | | TPH (mg/kg) | | | | Benzene (mg/kg) | Toluene (mg/kg) | Ethlybenzene (mg/kg) | Xylene (mg/kg) | Total BTEX (mg/kg) | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | In-Situ | Removed | GRO | DRO | MRO | Total | | | | | | |
| **BH-1** | 11/18/2020 | 4.0'-4.5' | X | - | <49.9 | <49.9 | <49.9 | <49.9 | <0.00202 | <0.00202 | <0.00202 | <0.002020 | <0.002020 | 13.8 |
| **BH-2** | 11/18/2020 | 4.0'-4.5' | X | - | <49.8 | <49.8 | <49.8 | <49.8 | <0.00200 | <0.00200 | <0.00200 | <0.002000 | <0.002000 | 17.6 |
| **BH-3** | 11/18/2020 | 4.0'-4.5' | X | - | <50.0 | <50.0 | <50.0 | <50.0 | <0.00200 | <0.00200 | <0.00200 | <0.002000 | <0.002000 | 12.4 |
| **BH-4** | 11/18/2020 | 4.0'-4.5' | X | - | <50.0 | <50.0 | <50.0 | <50.0 | <0.00199 | <0.00199 | <0.00199 | <0.001990 | <0.001990 | 15.9 |
| **BH-5** | 11/18/2020 | 4.0'-4.5' | X | - | <49.9 | <49.9 | <49.9 | <49.9 | <0.00202 | <0.00202 | <0.00202 | <0.002020 | <0.002020 | 14.5 |
| **BH-6** | 11/18/2020 | 4.0'-4.5' | X | - | <49.8 | <49.8 | <49.8 | <49.8 | <0.00201 | <0.00201 | <0.00201 | <0.002010 | <0.002010 | 11.8 |
| **BH-7** | 11/18/2020 | 4.0'-4.5' | X | - | <50.0 | <50.0 | <50.0 | <50.0 | <0.00199 | <0.00199 | <0.00199 | <0.001990 | <0.001990 | 13.8 |
| **BH-8** | 11/18/2020 | 4.0'-4.5' | X | - | <50.0 | <50.0 | <50.0 | <50.0 | <0.00200 | <0.00200 | <0.00200 | <0.002000 | <0.002000 | 17.4 |
| **BH-9** | 11/18/2020 | 3.0' | X | - | <49.9 | <49.9 | <49.9 | <49.9 | <0.00199 | <0.00199 | <0.00199 | <0.001990 | <0.001990 | 14.3 |
| **BH-10** | 11/18/2020 | 3.0' | X | - | <49.8 | <49.8 | <49.8 | <49.8 | <0.00200 | <0.00200 | <0.00200 | <0.002000 | <0.002000 | 23.5 |
| **SW-1** | 11/18/2020 | - | X | - | <50.0 | <50.0 | <50.0 | <50.0 | <0.00201 | <0.00201 | <0.00201 | <0.002010 | <0.002010 | 19.1 |
| **SW-2** | 11/18/2020 | - | X | - | <50.0 | <50.0 | <50.0 | <50.0 | <0.00198 | <0.00198 | <0.00198 | <0.001980 | <0.001980 | 11.9 |
| **SW-3** | 11/18/2020 | - | X | - | <50.0 | <50.0 | <50.0 | <50.0 | <0.00199 | <0.00199 | <0.00199 | <0.001990 | <0.001990 | 15.2 |
| **SW-4** | 11/18/2020 | - | X | - | <49.9 | <49.9 | <49.9 | <49.9 | <0.00199 | <0.00199 | <0.00199 | <0.001990 | <0.001990 | 14.5 |
| **SW-5** | 11/18/2020 | - | X | - | <49.8 | <49.8 | <49.8 | <49.8 | <0.00202 | <0.00202 | <0.00202 | <0.002020 | <0.002020 | 12.4 |
| **SW-6** | 11/18/2020 | - | X | - | <49.9 | <49.9 | <49.9 | <49.9 | <0.00202 | <0.00202 | <0.00202 | <0.002020 | <0.002020 | 16.7 |
| **SW-7** | 11/18/2020 | - | X | - | <50.0 | <50.0 | <50.0 | <50.0 | <0.00198 | <0.00198 | <0.00198 | <0.001980 | <0.001980 | 8.32 |
| **SW-8** | 11/18/2020 | - | X | - | <49.9 | <49.9 | <49.9 | <49.9 | <0.00200 | <0.00200 | <0.00200 | <0.002000 | <0.002000 | 12.8 |
| **SW-9** | 11/18/2020 | - | X | - | <50.0 | <50.0 | <50.0 | <50.0 | <0.00200 | <0.00200 | <0.00200 | <0.002000 | <0.002000 | 44.2 |

( - ) Not Analyzed

# Photos

EOG Resources
Falcon Riser Pipeline
Lea County, New Mexico


View of Release Area – View East




View of Release Area – View South

EOG Resources
Falcon Riser Pipeline
Lea County, New Mexico

TETRA TECH


View East, areas of Bottom Holes (1-8)


View North, areas of Bottom Holes (9-10)

# Appendix A

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

| | |
|---|---|
| Incident ID | NRM2035146148 |
| District RP | |
| Facility ID | |
| Application ID | |

# Release Notification

## Responsible Party

| | |
|---|---|
| Responsible Party EOG Resources | OGRID 7377 |
| Contact Name Todd Wells | Contact Telephone (432) 686-3613 |
| Contact email Todd_Wells@eogresources.com | Incident # *(assigned by OCD)* |
| Contact mailing address 5509 Champions Drive Midland, TX 79706 | |

## Location of Release Source

Latitude 32.178747° Longitude -103.535832°
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name Falcon Riser Pipeline | Site Type Reuse Water Pipeline |
| Date Release Discovered 6/23/20 | API# *(if applicable)* |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| A | 35 | 24S | 33E | Lea |

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* _____)

## Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

| | | |
|---|---|---|
| ☐ Crude Oil | Volume Released (bbls) | Volume Recovered (bbls) |
| ☒ Reuse Water | Volume Released (bbls) 6 | Volume Recovered (bbls) 1 |
| | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | ☒ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release: While pumping from pit to pit a closed valve caused the reuse water line to pressure up. The high pressure resulted in a release of 6 bbls of reuse water at the Falcon Riser with 1 bbls recovered.

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NRM2035146148 |
| District RP | |
| Facility ID | |
| Application ID | |

| | |
|---|---|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br>☐ Yes ☒ No | If YES, for what reason(s) does the responsible party consider this a major release? |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? | |

## Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

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

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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: Todd Wells Title: Environmental Specialist

Signature: Todd Wells Date: 12-7-20

email: Todd_Wells@eogresources.com Telephone: (432) 686-3613

**OCD Only**

Received by: Ramona Marcus Date: 12/16/2020

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

# Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

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

Printed Name: _____ Title: _____

Signature: Todd Wells Date: _____

email: _____ Telephone: _____

**OCD Only**

Received by: Cristina Eads Date: 12/30/2020

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | |
| Application ID | |

# Closure

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

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

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature: Todd Wells Date: _____

email: _____ Telephone: _____

**OCD Only**

Received by: Cristina Eads Date: 12/30/2020

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

Closure Approved by: _____ Date: 02/25/2021

Printed Name: Cristina Eads Title: Environmental Specialist

# Appendix B

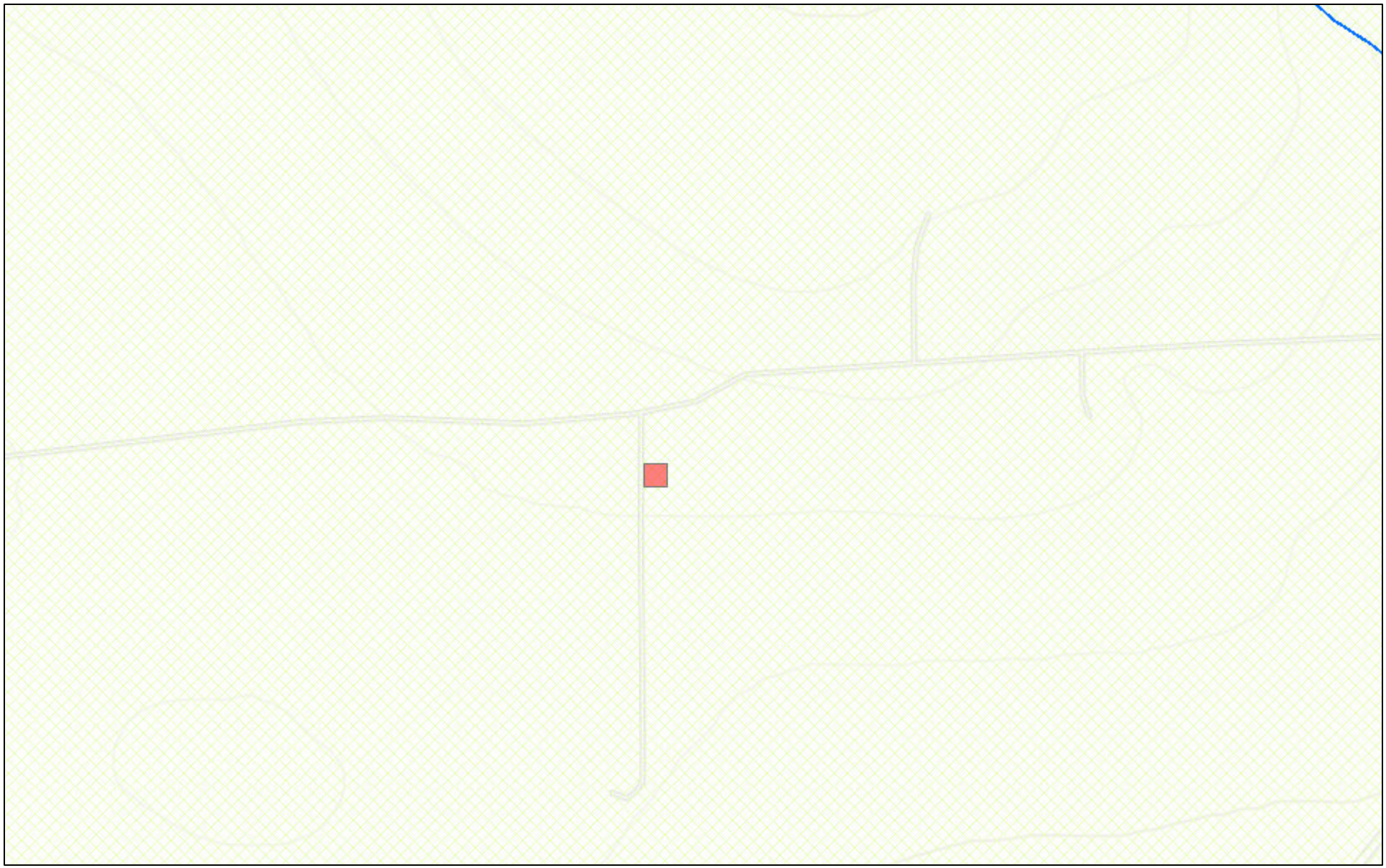
USGS
science for a changing world

National Water Information System: Mapper

USGS H
Contact
Search


Site Information

# New Mexico NFHL Data



October 4, 2020

1:9,028

0 0.075 0.15 0.3 mi

0 0.1 0.2 0.4 km

FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: New Mexico | GO

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

## Search Results -- 1 sites found

**Agency code =** usgs
**site_no list =**
- 321127103310401

**Minimum number of levels =** 1
Save file of selected sites to local disk for future upload

## USGS 321127103310401 24S.33E.24.44444

Lea County, New Mexico
Latitude 32°11'27", Longitude 103°31'04" NAD27
Land-surface elevation 3,538 feet above NAVD88
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

**Output formats**

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

| Date | Time | ? Water-level date-time accuracy | Water level, feet below land surface | Water level, feet above specific vertical datum | Referenced vertical datum | ? Water-level accuracy | ? Status | ? Method of measurement | ? Measuring agency | ? Source of measurement | ? Water-level approval status |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1953-11-27 | | D | 17.40 | | | 2 | | U | | U | A |
| 1976-01-21 | | D | 13.57 | | | 2 | | U | | U | A |
| 1981-03-19 | | D | 16.03 | | | 2 | | U | | U | A |
| 1986-03-06 | | D | 14.80 | | | 2 | | U | | U | A |
| 1991-05-29 | | D | 17.56 | | | 2 | | U | | U | A |

**Explanation**

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

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

# 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 Sub-basin Code | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | Depth Well | Depth Water | Water Column |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 02308 | CUB | LE | 1 | 3 | 1 | 10 | 24S | 33E | 634953 | 3567364* | 40 | 20 | 20 |
| C 02309 | CUB | LE | 2 | 2 | 2 | 25 | 24S | 33E | 639708 | 3562997 | 60 | 30 | 30 |
| C 02310 | CUB | LE | 2 | 4 | 2 | 33 | 24S | 33E | 634420 | 3560893 | 120 | 70 | 50 |
| C 02311 | CUB | LE | 2 | 3 | 2 | 33 | 24S | 33E | 634391 | 3560877 | 120 | 70 | 50 |
| C 02430 | CUB | LE | 3 | 3 | 3 | 16 | 24S | 33E | 633377 | 3564732* | 643 | 415 | 228 |
| C 02431 | CUB | LE | 4 | 4 | 4 | 17 | 24S | 33E | 633175 | 3564728* | 525 | 415 | 110 |
| C 02432 | CUB | LE | 4 | 4 | 4 | 17 | 24S | 33E | 633175 | 3564728* | 640 | 415 | 225 |
| C 02563 | CUB | LE | 1 | 4 | 2 | 33 | 24S | 33E | 634639 | 3560923* | 120 | | |
| C 02564 | CUB | LE | 2 | 4 | 2 | 33 | 24S | 33E | 634839 | 3560923* | 120 | | |
| C 02890 | C | LE | | 2 | 4 | 29 | 24S | 33E | 633114 | 3562012* | 500 | | |
| C 03565 POD3 | CUB | LE | | 3 | 4 | 08 | 24S | 33E | 632763 | 3566546 | | 1533 | |
| C 03591 POD1 | CUB | LE | 2 | 1 | 4 | 05 | 24S | 33E | 632731 | 3568518 | | | |
| C 03600 POD1 | CUB | LE | 2 | 2 | 1 | 26 | 24S | 33E | 637275 | 3563023 | | | |
| C 03600 POD2 | CUB | LE | 4 | 4 | 1 | 25 | 24S | 33E | 638824 | 3562329 | | | |
| C 03600 POD3 | CUB | LE | 3 | 4 | 2 | 26 | 24S | 33E | 637784 | 3562340 | | | |
| C 03600 POD4 | CUB | LE | 3 | 3 | 1 | 26 | 24S | 33E | 636617 | 3562293 | | | |
| C 03600 POD5 | CUB | LE | 3 | 2 | 4 | 26 | 24S | 33E | 637857 | 3562020 | | | |
| C 03600 POD6 | CUB | LE | 3 | 1 | 4 | 26 | 24S | 33E | 637383 | 3562026 | | | |
| C 03600 POD7 | CUB | LE | 3 | 1 | 3 | 26 | 24S | 33E | 636726 | 3561968 | | | |
| C 03601 POD1 | CUB | LE | 4 | 4 | 2 | 23 | 24S | 33E | 638124 | 3563937 | | | |
| C 03601 POD2 | CUB | LE | 3 | 2 | 4 | 23 | 24S | 33E | 637846 | 3563588 | | | |
| C 03601 POD3 | CUB | LE | 1 | 3 | 3 | 24 | 24S | 33E | 638142 | 3563413 | | | |
| C 03601 POD4 | CUB | LE | 3 | 3 | 3 | 24 | 24S | 33E | 638162 | 3561375 | | | |
| C 03601 POD5 | CUB | LE | 2 | 4 | 4 | 23 | 24S | 33E | 637988 | 3563334 | | | |
| C 03601 POD6 | CUB | LE | 1 | 4 | 4 | 23 | 24S | 33E | 637834 | 3563338 | | | |
| C 03601 POD7 | CUB | LE | 4 | 4 | 4 | 23 | 24S | 33E | 637946 | 3563170 | | | |

***UTM location was derived from PLSS - see Help**

(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 Sub-basin | County | Q 64 | Q 16 | Q 4 | Sec | Tws | Rng | X | Y | Depth Well | Depth Water | Water Column |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C 03602 POD2 | CUB | LE | 4 | 4 | 1 | 25 | 24S | 33E | 638824 | 3562329 | | | |
| C 03603 POD1 | CUB | LE | 3 | 2 | 2 | 35 | 24S | 33E | 637805 | 3561225 | | | |
| C 03603 POD2 | CUB | LE | 3 | 1 | 2 | 35 | 24S | 33E | 637384 | 3561167 | | | |
| C 03603 POD3 | CUB | LE | 4 | 1 | 1 | 35 | 24S | 33E | 636890 | 3561092 | | | |
| C 03603 POD4 | CUB | LE | 3 | 2 | 4 | 35 | 24S | 33E | 637789 | 3560461 | | | |
| C 03603 POD5 | CUB | LE | 3 | 3 | 2 | 35 | 24S | 33E | 636745 | 3560767 | | | |
| C 03603 POD6 | CUB | LE | 3 | 1 | 3 | 35 | 24S | 33E | 636749 | 3560447 | | | |
| C 03662 POD1 | C | LE | 3 | 1 | 2 | 23 | 24S | 33E | 637342 | 3564428 | 550 | 110 | 440 |
| C 03666 POD1 | C | LE | 2 | 3 | 4 | 13 | 24S | 33E | 639132 | 3565078 | 650 | 390 | 260 |
| C 03917 POD1 | C | LE | 4 | 1 | 3 | 13 | 24S | 33E | 638374 | 3565212 | 600 | 420 | 180 |
| C 04014 POD2 | CUB | LE | 4 | 4 | 2 | 01 | 24S | 33E | 639656 | 3568917 | 95 | 81 | 14 |
| C 04014 POD3 | CUB | LE | 2 | 4 | 2 | 01 | 24S | 33E | 639497 | 3569007 | 95 | 87 | 8 |
| C 04014 POD4 | CUB | LE | 3 | 4 | 2 | 01 | 24S | 33E | 639295 | 3568859 | 96 | 86 | 10 |
| C 04014 POD5 | CUB | LE | 1 | 4 | 2 | 01 | 24S | 33E | 639284 | 3569086 | 95 | 85 | 10 |
| C 04339 POD1 | CUB | LE | 1 | 3 | 3 | 23 | 24S | 33E | 636525 | 3563309 | 47 | | |
| C 04339 POD10 | CUB | LE | 4 | 1 | 4 | 23 | 24S | 33E | 637688 | 3563503 | 49 | | |
| C 04339 POD2 | CUB | LE | 2 | 3 | 3 | 23 | 24S | 33E | 636789 | 3563315 | | | |
| C 04339 POD3 | CUB | LE | 2 | 4 | 3 | 23 | 24S | 33E | 637273 | 3563323 | 38 | | |
| C 04339 POD4 | CUB | LE | 2 | 4 | 3 | 23 | 24S | 33E | 637273 | 3563323 | 47 | | |
| C 04339 POD5 | CUB | LE | 2 | 3 | 4 | 23 | 24S | 33E | 637580 | 3563328 | 54 | | |
| C 04339 POD6 | CUB | LE | 3 | 1 | 2 | 23 | 24S | 33E | 637340 | 3564386 | 60 | | |
| C 04339 POD7 | CUB | LE | 4 | 4 | 2 | 23 | 24S | 33E | 636473 | 3564011 | 43 | | |
| C 04339 POD8 | CUB | LE | 1 | 1 | 3 | 23 | 24S | 33E | 636519 | 3563681 | 30 | | |
| C 04339 POD9 | CUB | LE | 3 | 4 | 2 | 23 | 24S | 33E | 637731 | 3563913 | 45 | | |

Average Depth to Water: **281 feet**

Minimum Depth: **20 feet**

Maximum Depth: **1533 feet**

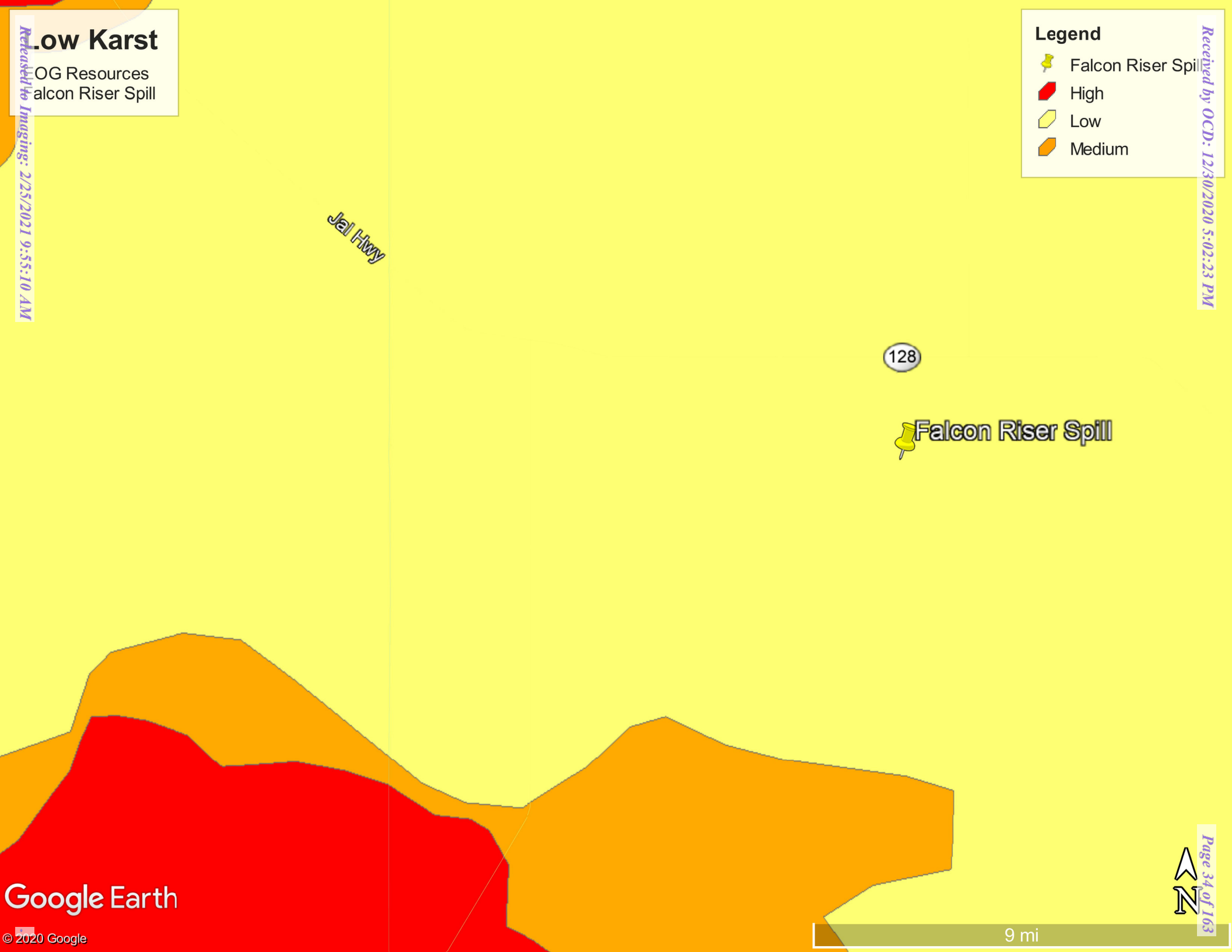
**Record Count:** 50

**Basin/County Search:**

**County:** Lea

**PLSS Search:**

**Township:** 24S **Range:** 33E



# Water Well Data
## Average Depth to Groundwater (ft)
## Falcon Riser Spill
## Lea County, New Mexico

**23 South 32 East**

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21<br>400 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

**23 South 33 East**

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

**23 South 34 East**

| | | | | | |
|---|---|---|---|---|---|
| 6 329 | 5 | 4 | 3 | 2 | 1 137 |
| 7 | 8 255 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 345 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 282<br>295 | 23 233<br>265 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 160<br>130 | 33 | 34 | 35 | 36 |

**24 South 32 East**

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10<br>20 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33<br>290 | 34 | 35 | 36 |

**24 South 33 East**

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 20<br>22 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23<br>208 | 24<br>16.9 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 70<br>93.2 | 34 | 35 | 36 |

**24 South 34 East**

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

**25 South 32 East**

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32<br>290 | 33 | 34 | 35 | 36 |

**25 South 33 East**

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5<br>118 | 4 | 3 172 | 2 | 1 |
| 7 | 8 | 9 | 10 | 11<br>140 | 12<br>200 |
| 18 | 17 | 16 | 15 | 14 | 13<br>185 |
| 19 | 20<br>200 | 21<br>120 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27<br>125 | 26<br>110 | 25 |
| 31<br>190 | 32 | 33 | 34 | 35 | 36 |

**25 South 34 East**

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 3 | 2 | 1 260 |
| 7 | 8 | 9 | 10 | 11 | 12 |
| 18 | 17 | 16 | 15<br>135 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24<br>300 |
| 30 | 29 129<br>50 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |

**88** New Mexico State Engineers Well Reports

**105** USGS Well Reports

**90** Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

Geology and Groundwater Resources of Eddy County, NM (Report 3)

**34** NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

**143** NMOCD Groundwater map well location

# Appendix C

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# Analytical Report 675579

## for

## Tetra Tech- Midland

**Project Manager: Mike Carmona**

**Falcon Riser**

**212C-MD-02330**

**10.22.2020**

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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# Certificate of Analysis Summary 675579

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

**Date Received in Lab:** Tue 10.20.2020 13:26
**Report Date:** 10.22.2020 15:12
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 675579-001 | | 675579-002 | | 675579-003 | | | | | |
| | ***Field Id:*** | Horizontal-1 (0-1') | | Horizontal-2 (0-1') | | Horizontal-3 (0-1') | | | | | |
| | ***Depth:*** | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | | | | |
| | ***Sampled:*** | 10.19.2020 13:35 | | 10.19.2020 13:35 | | 10.19.2020 13:35 | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | 10.20.2020 17:00 | | 10.21.2020 16:00 | | 10.20.2020 17:00 | | | | | |
| | ***Analyzed:*** | 10.20.2020 20:48 | | 10.22.2020 03:23 | | 10.21.2020 03:40 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Benzene | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| Toluene | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| Ethylbenzene | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| m,p-Xylenes | | <0.00398 | 0.00398 | <0.00399 | 0.00399 | <0.00398 | 0.00398 | | | | |
| o-Xylene | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| Total Xylenes | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| Total BTEX | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | 10.20.2020 16:00 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | | | | |
| | ***Analyzed:*** | 10.20.2020 22:21 | | 10.20.2020 17:32 | | 10.20.2020 17:51 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Chloride | | 48.6 | 5.04 | 13.3 | 5.00 | 37.3 | 25.2 | | | | |
| **TPH By SW8015 Mod** | ***Extracted:*** | 10.20.2020 17:00 | | 10.20.2020 17:00 | | 10.20.2020 17:00 | | | | | |
| | ***Analyzed:*** | 10.21.2020 05:43 | | 10.21.2020 06:02 | | 10.21.2020 06:21 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Gasoline Range Hydrocarbons (GRO) | | <49.9 | 49.9 | <49.8 | 49.8 | <50.0 | 50.0 | | | | |
| Diesel Range Organics (DRO) | | <49.9 | 49.9 | <49.8 | 49.8 | <50.0 | 50.0 | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | <49.9 | 49.9 | <49.8 | 49.8 | <50.0 | 50.0 | | | | |
| Total TPH | | <49.9 | 49.9 | <49.8 | 49.8 | <50.0 | 50.0 | | | | |

BRL - Below Reporting Limit

Jessica Kramer

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

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10.22.2020

Project Manager: **Mike Carmona**
**Tetra Tech- Midland**
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **675579**
**Falcon Riser**
Project Address: Lea County, New Mexico

**Mike Carmona**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 675579. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 675579 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

**Jessica Kramer**
Project Manager

*A Small Business and Minority Company*

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

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# Sample Cross Reference 675579

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| Horizontal-1 (0-1') | S | 10.19.2020 13:35 | | 675579-001 |
| Horizontal-2 (0-1') | S | 10.19.2020 13:35 | | 675579-002 |
| Horizontal-3 (0-1') | S | 10.19.2020 13:35 | | 675579-003 |

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# CASE NARRATIVE

***Client Name: Tetra Tech- Midland***

***Project Name: Falcon Riser***

Project ID: *212C-MD-02330*
Work Order Number(s): *675579*

Report Date: *10.22.2020*
Date Received: *10.20.2020*

**Sample receipt non conformances and comments:**

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3140197 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits.. Samples affected are: 7713621-1-BSD,675579-003.

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# Certificate of Analytical Results 675579

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **Horizontal-1 (0-1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675579-001 | Date Collected: | 10.19.2020 13:35 | | |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:00 | % Moisture: | |
| Seq Number: | 3140188 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **48.6** | 5.04 | mg/kg | 10.20.2020 22:21 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH By SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DVM | | | | |
| Analyst: | ARM | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140234 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.9 | 49.9 | mg/kg | 10.21.2020 05:43 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.9 | 49.9 | mg/kg | 10.21.2020 05:43 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.9 | 49.9 | mg/kg | 10.21.2020 05:43 | U | 1 |
| Total TPH | PHC635 | <49.9 | 49.9 | mg/kg | 10.21.2020 05:43 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 100 | % | 70-130 | 10.21.2020 05:43 | |
| o-Terphenyl | 84-15-1 | 109 | % | 70-130 | 10.21.2020 05:43 | |

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# Certificate of Analytical Results 675579

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **Horizontal-1 (0-1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675579-001 | Date Collected: | 10.19.2020 13:35 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140197 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 10.20.2020 20:48 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 10.20.2020 20:48 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 10.20.2020 20:48 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 10.20.2020 20:48 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 10.20.2020 20:48 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 10.20.2020 20:48 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 10.20.2020 20:48 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 84 | % | 70-130 | 10.20.2020 20:48 | |
| 4-Bromofluorobenzene | 460-00-4 | 116 | % | 70-130 | 10.20.2020 20:48 | |

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# Certificate of Analytical Results 675579

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **Horizontal-2 (0-1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675579-002 | Date Collected: | 10.19.2020 13:35 | | |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **13.3** | 5.00 | mg/kg | 10.20.2020 17:32 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH By SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DVM | | | | |
| Analyst: | ARM | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140234 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.8 | 49.8 | mg/kg | 10.21.2020 06:02 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.8 | 49.8 | mg/kg | 10.21.2020 06:02 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.8 | 49.8 | mg/kg | 10.21.2020 06:02 | U | 1 |
| Total TPH | PHC635 | <49.8 | 49.8 | mg/kg | 10.21.2020 06:02 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 94 | % | 70-130 | 10.21.2020 06:02 | |
| o-Terphenyl | 84-15-1 | 99 | % | 70-130 | 10.21.2020 06:02 | |

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# Certificate of Analytical Results 675579

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Horizontal-2 (0-1')** Matrix: Soil Date Received:10.20.2020 13:26

Lab Sample Id: 675579-002 Date Collected: 10.19.2020 13:35

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 10.21.2020 16:00 % Moisture:

Seq Number: 3140285 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 10.22.2020 03:23 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 10.22.2020 03:23 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 10.22.2020 03:23 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 10.22.2020 03:23 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 10.22.2020 03:23 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 10.22.2020 03:23 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 10.22.2020 03:23 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 97 | % | 70-130 | 10.22.2020 03:23 | |
| 4-Bromofluorobenzene | 460-00-4 | 118 | % | 70-130 | 10.22.2020 03:23 | |

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# Certificate of Analytical Results 675579

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Horizontal-3 (0-1')** Matrix: Soil Date Received:10.20.2020 13:26

Lab Sample Id: 675579-003 Date Collected: 10.19.2020 13:35

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.20.2020 16:40 % Moisture:

Seq Number: 3140190 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **37.3** | 25.2 | mg/kg | 10.20.2020 17:51 | | 5 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.20.2020 17:00 % Moisture:

Seq Number: 3140234 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 10.21.2020 06:21 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 10.21.2020 06:21 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 10.21.2020 06:21 | U | 1 |
| Total TPH | PHC635 | <50.0 | 50.0 | mg/kg | 10.21.2020 06:21 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-130 | 10.21.2020 06:21 | |
| o-Terphenyl | 84-15-1 | 119 | % | 70-130 | 10.21.2020 06:21 | |

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# Certificate of Analytical Results 675579

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **Horizontal-3 (0-1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675579-003 | Date Collected: | 10.19.2020 13:35 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140197 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 03:40 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 03:40 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 03:40 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 10.21.2020 03:40 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 03:40 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 03:40 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 10.21.2020 03:40 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 95 | % | 70-130 | 10.21.2020 03:40 | |
| 4-Bromofluorobenzene | 460-00-4 | 138 | % | 70-130 | 10.21.2020 03:40 | ** |

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# 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

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# QC Summary 675579

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140188 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713598-1-BLK — LCS Sample Id: 7713598-1-BKS — LCSD Sample Id: 7713598-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 253 | 101 | 252 | 101 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 19:53 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140190 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713600-1-BLK — LCS Sample Id: 7713600-1-BKS — LCSD Sample Id: 7713600-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 258 | 103 | 258 | 103 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 17:19 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140188 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675578-001 — MS Sample Id: 675578-001 S — MSD Sample Id: 675578-001 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 | 250 | 275 | 105 | 275 | 105 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 20:09 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140188 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675578-011 — MS Sample Id: 675578-011 S — MSD Sample Id: 675578-011 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13.3 | 250 | 288 | 110 | 290 | 111 | 90-110 | 1 | 20 | mg/kg | 10.20.2020 21:23 | X |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140190 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675579-002 — MS Sample Id: 675579-002 S — MSD Sample Id: 675579-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13.3 | 250 | 275 | 105 | 275 | 105 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 17:38 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140190 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675580-010 — MS Sample Id: 675580-010 S — MSD Sample Id: 675580-010 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5800 | 2500 | 8370 | 103 | 8360 | 102 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 19:07 | |

MS/MSD Percent Recovery — [D] = 100*(C-A) / B
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery — [D] = 100 * (C) / [B]
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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# QC Summary 675579

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3140234 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713615-1-BLK — LCS Sample Id: 7713615-1-BKS — LCSD Sample Id: 7713615-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | <50.0 | 1000 | 1130 | 113 | 961 | 96 | 70-130 | 16 | 20 | mg/kg | 10.21.2020 03:11 | |
| Diesel Range Organics (DRO) | <50.0 | 1000 | 1120 | 112 | 982 | 98 | 70-130 | 13 | 20 | mg/kg | 10.21.2020 03:11 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 112 | | 116 | | 126 | | 70-130 | % | 10.21.2020 03:11 |
| o-Terphenyl | 129 | | 126 | | 119 | | 70-130 | % | 10.21.2020 03:11 |

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3140234 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713615-1-BLK

| Parameter | MB Result | Units | Analysis Date | Flag |
|---|---|---|---|---|
| Motor Oil Range Hydrocarbons (MRO) | <50.0 | mg/kg | 10.21.2020 02:52 | |

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3140234 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675580-001 — MS Sample Id: 675580-001 S — MSD Sample Id: 675580-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | <49.9 | 997 | 890 | 89 | 914 | 91 | 70-130 | 3 | 20 | mg/kg | 10.21.2020 04:08 | |
| Diesel Range Organics (DRO) | <49.9 | 997 | 905 | 91 | 916 | 92 | 70-130 | 1 | 20 | mg/kg | 10.21.2020 04:08 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 118 | | 118 | | 70-130 | % | 10.21.2020 04:08 |
| o-Terphenyl | 113 | | 118 | | 70-130 | % | 10.21.2020 04:08 |

**Analytical Method:** BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3140197 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713621-1-BLK — LCS Sample Id: 7713621-1-BKS — LCSD Sample Id: 7713621-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | 0.100 | 0.0944 | 94 | 0.0987 | 99 | 70-130 | 4 | 35 | mg/kg | 10.20.2020 18:16 | |
| Toluene | <0.00200 | 0.100 | 0.0970 | 97 | 0.104 | 104 | 70-130 | 7 | 35 | mg/kg | 10.20.2020 18:16 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.0925 | 93 | 0.103 | 103 | 70-130 | 11 | 35 | mg/kg | 10.20.2020 18:16 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.200 | 100 | 0.214 | 107 | 70-130 | 7 | 35 | mg/kg | 10.20.2020 18:16 | |
| o-Xylene | <0.00200 | 0.100 | 0.0971 | 97 | 0.103 | 103 | 70-130 | 6 | 35 | mg/kg | 10.20.2020 18:16 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 81 | | 92 | | 93 | | 70-130 | % | 10.20.2020 18:16 |
| 4-Bromofluorobenzene | 98 | | 127 | | 133 | ** | 70-130 | % | 10.20.2020 18:16 |

MS/MSD Percent Recovery — [D] = 100*(C-A) / B
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery — [D] = 100 * (C) / [B]
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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# QC Summary 675579

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** BTEX by EPA 8021B — Prep Method: SW5035A

Seq Number: 3140285 — Matrix: Solid — Date Prep: 10.21.2020

MB Sample Id: 7713697-1-BLK — LCS Sample Id: 7713697-1-BKS — LCSD Sample Id: 7713697-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | 0.100 | 0.115 | 115 | 0.116 | 116 | 70-130 | 1 | 35 | mg/kg | 10.21.2020 21:16 | |
| Toluene | <0.00200 | 0.100 | 0.102 | 102 | 0.104 | 104 | 70-130 | 2 | 35 | mg/kg | 10.21.2020 21:16 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.105 | 105 | 0.108 | 108 | 70-130 | 3 | 35 | mg/kg | 10.21.2020 21:16 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.214 | 107 | 0.219 | 110 | 70-130 | 2 | 35 | mg/kg | 10.21.2020 21:16 | |
| o-Xylene | <0.00200 | 0.100 | 0.107 | 107 | 0.109 | 109 | 70-130 | 2 | 35 | mg/kg | 10.21.2020 21:16 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 97 | | 100 | | 99 | | 70-130 | % | 10.21.2020 21:16 |
| 4-Bromofluorobenzene | 104 | | 101 | | 101 | | 70-130 | % | 10.21.2020 21:16 |

**Analytical Method:** BTEX by EPA 8021B — Prep Method: SW5035A

Seq Number: 3140197 — Matrix: Soil — Date Prep: 10.20.2020

Parent Sample Id: 675579-001 — MS Sample Id: 675579-001 S — MSD Sample Id: 675579-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | 0.0996 | 0.0835 | 84 | 0.0730 | 73 | 70-130 | 13 | 35 | mg/kg | 10.20.2020 18:57 | |
| Toluene | <0.00199 | 0.0996 | 0.0892 | 90 | 0.0793 | 79 | 70-130 | 12 | 35 | mg/kg | 10.20.2020 18:57 | |
| Ethylbenzene | <0.00199 | 0.0996 | 0.0833 | 84 | 0.0702 | 70 | 70-130 | 17 | 35 | mg/kg | 10.20.2020 18:57 | |
| m,p-Xylenes | <0.00398 | 0.199 | 0.180 | 90 | 0.152 | 76 | 70-130 | 17 | 35 | mg/kg | 10.20.2020 18:57 | |
| o-Xylene | <0.00199 | 0.0996 | 0.0874 | 88 | 0.0765 | 77 | 70-130 | 13 | 35 | mg/kg | 10.20.2020 18:57 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 96 | | 90 | | 70-130 | % | 10.20.2020 18:57 |
| 4-Bromofluorobenzene | 128 | | 107 | | 70-130 | % | 10.20.2020 18:57 |

**Analytical Method:** BTEX by EPA 8021B — Prep Method: SW5035A

Seq Number: 3140285 — Matrix: Soil — Date Prep: 10.21.2020

Parent Sample Id: 675581-059 — MS Sample Id: 675581-059 S — MSD Sample Id: 675581-059 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | 0.100 | 0.0987 | 99 | 0.0894 | 90 | 70-130 | 10 | 35 | mg/kg | 10.21.2020 21:57 | |
| Toluene | <0.00200 | 0.100 | 0.0856 | 86 | 0.0790 | 79 | 70-130 | 8 | 35 | mg/kg | 10.21.2020 21:57 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.0846 | 85 | 0.0798 | 80 | 70-130 | 6 | 35 | mg/kg | 10.21.2020 21:57 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.172 | 86 | 0.162 | 81 | 70-130 | 6 | 35 | mg/kg | 10.21.2020 21:57 | |
| o-Xylene | <0.00200 | 0.100 | 0.0848 | 85 | 0.0805 | 81 | 70-130 | 5 | 35 | mg/kg | 10.21.2020 21:57 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 | | 100 | | 70-130 | % | 10.21.2020 21:57 |
| 4-Bromofluorobenzene | 104 | | 105 | | 70-130 | % | 10.21.2020 21:57 |

MS/MSD Percent Recovery [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

Analysis Request of Chain of Custody Record

675579 Page 1 of 1

# Tetra Tech, Inc.

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

| | |
|---|---|
| Client Name: EOG | Site Manager: Mike Carmona |
| Project Name: Falcon Riser | |
| Project Location: (county, state) Lea County, New Mexico | Project #: 212C-MD-02330 |
| Invoice to: EOG- Galan Kelley | |
| Receiving Laboratory: Xenco | Sampler Signature: Devin Dominguez |
| Comments: | |

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING YEAR: 2020 DATE | SAMPLING TIME | MATRIX WATER | MATRIX SOIL | MATRIX | PRESERVATIVE METHOD HCL | PRESERVATIVE METHOD $HNO_3$ | PRESERVATIVE METHOD ICE | PRESERVATIVE METHOD None | # CONTAINERS | FILTERED (Y/N) | BTEX 8021B BTEX 8260B | TPH TX1005 (Ext to C35) | TPH 8015M ( GRO - DRO - ORO - MRO) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8260B / 624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082 / 608 | NORM | PLM (Asbestos) | Chloride | Chloride Sulfate TDS | General Water Chemistry (see attached list) | Anion/Cation Balance | TPH 8015R | | | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Horizontal-1 (0-1') | 10/19/2020 | | | X | | | | X | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Horizontal-2 (0-1') | 10/19/2020 | | | X | | | | X | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Horizontal-3 (0-1') | 10/19/2020 | | | X | | | | X | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: | Date: 10/20 | Time: | Received by: |
| Relinquished by: | Date: | Time: | Received by: |
| Relinquished by: | Date: | Time: | Received by: |

Received by: Date: 10/20/20 Time: 13:26

Received by: Date: Time:

Received by: Date: Time:

**LAB USE ONLY**

Sample Temperature 2.9/3.4

**REMARKS:**

- [X] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

# Eurofins Xenco, LLC

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** Tetra Tech- Midland

**Date/ Time Received:** 10.20.2020 01.26.00 PM

**Work Order #:** 675579

**Acceptable Temperature Range: 0 - 6 degC**
**Air and Metal samples Acceptable Range: Ambient**

**Temperature Measuring device used : IR-8**

| Sample Receipt Checklist | | Comments |
|---|---|---|
| #1 *Temperature of cooler(s)? | 3.4 | |
| #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** | BTEX was in bulk container |
| #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: 10.20.2020
Brianna Teel

**Checklist reviewed by:** Jessica Kramer Date: 10.21.2020
Jessica Kramer

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# Analytical Report 675580

## for

## Tetra Tech- Midland

**Project Manager: Mike Carmona**

**Falcon Riser**

**212C-MD-02330**

**10.22.2020**

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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# Certificate of Analysis Summary 675580

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

**Date Received in Lab:** Tue 10.20.2020 13:26
**Report Date:** 10.22.2020 15:13
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | |
|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 675580-001 | 675580-002 | 675580-003 | 675580-004 | 675580-005 | 675580-006 |
| | ***Field Id:*** | T-1 (0-1') | T-1 (1') | T-1 (2) | T-1 (3') | T-1 (4') | T-1 (5') |
| | ***Depth:*** | | | | | | |
| | ***Matrix:*** | SOIL | SOIL | SOIL | SOIL | SOIL | SOIL |
| | ***Sampled:*** | 10.19.2020 00:00 | 10.19.2020 00:00 | 10.19.2020 00:00 | 10.19.2020 00:00 | 10.19.2020 00:00 | 10.19.2020 00:00 |
| **BTEX by EPA 8021B** | ***Extracted:*** | 10.21.2020 09:00 | | | | | |
| | ***Analyzed:*** | 10.21.2020 12:33 | | | | | |
| | ***Units/RL:*** | mg/kg RL | | | | | |
| Benzene | | 0.0898 0.00199 | | | | | |
| Toluene | | 0.0925 0.00199 | | | | | |
| Ethylbenzene | | 0.0879 0.00199 | | | | | |
| m,p-Xylenes | | 0.184 0.00398 | | | | | |
| o-Xylene | | 0.0893 0.00199 | | | | | |
| Total Xylenes | | 0.273 0.00199 | | | | | |
| Total BTEX | | 0.544 0.00199 | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | 10.21.2020 09:00 | | | | | |
| | ***Analyzed:*** | 10.21.2020 12:54 | | | | | |
| | ***Units/RL:*** | mg/kg RL | | | | | |
| Benzene | | 0.0849 0.00199 | | | | | |
| Toluene | | 0.0883 0.00199 | | | | | |
| Ethylbenzene | | 0.0807 0.00199 | | | | | |
| m,p-Xylenes | | 0.176 0.00398 | | | | | |
| o-Xylene | | 0.0830 0.00199 | | | | | |
| Total Xylenes | | 0.259 0.00199 | | | | | |
| Total BTEX | | 0.513 0.00199 | | | | | |

BRL - Below Reporting Limit

Jessica Kramer

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

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# Certificate of Analysis Summary 675580

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

**Date Received in Lab:** Tue 10.20.2020 13:26
**Report Date:** 10.22.2020 15:13
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 675580-001 | | 675580-002 | | 675580-003 | | 675580-004 | | 675580-005 | | 675580-006 | |
| | ***Field Id:*** | T-1 (0-1') | | T-1 (1') | | T-1 (2) | | T-1 (3') | | T-1 (4') | | T-1 (5') | |
| | ***Depth:*** | | | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | 10.21.2020 09:00 | | | | | | | | | | | |
| | ***Analyzed:*** | 10.21.2020 14:28 | | | | | | | | | | | |
| | ***Units/RL:*** | mg/kg | RL | | | | | | | | | | |
| Benzene | | <0.00199 | 0.00199 | | | | | | | | | | |
| Toluene | | <0.00199 | 0.00199 | | | | | | | | | | |
| Ethylbenzene | | <0.00199 | 0.00199 | | | | | | | | | | |
| m,p-Xylenes | | <0.00398 | 0.00398 | | | | | | | | | | |
| o-Xylene | | <0.00199 | 0.00199 | | | | | | | | | | |
| Total Xylenes | | <0.00199 | 0.00199 | | | | | | | | | | |
| Total BTEX | | <0.00199 | 0.00199 | | | | | | | | | | |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | 10.20.2020 16:00 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | |
| | ***Analyzed:*** | 10.20.2020 22:26 | | 10.20.2020 17:57 | | 10.20.2020 18:03 | | 10.20.2020 18:10 | | 10.20.2020 18:29 | | 10.20.2020 18:35 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 4880 | 49.9 | 9550 | 49.9 | 3080 | 24.8 | 2850 | 25.1 | 526 | 5.00 | 345 | 5.00 |
| **TPH By SW8015 Mod** | ***Extracted:*** | 10.20.2020 17:00 | | | | | | | | | | | |
| | ***Analyzed:*** | 10.21.2020 03:49 | | | | | | | | | | | |
| | ***Units/RL:*** | mg/kg | RL | | | | | | | | | | |
| Gasoline Range Hydrocarbons (GRO) | | <50.0 | 50.0 | | | | | | | | | | |
| Diesel Range Organics (DRO) | | <50.0 | 50.0 | | | | | | | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | <50.0 | 50.0 | | | | | | | | | | |
| Total TPH | | <50.0 | 50.0 | | | | | | | | | | |

BRL - Below Reporting Limit

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

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# Certificate of Analysis Summary 675580

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

**Date Received in Lab:** Tue 10.20.2020 13:26
**Report Date:** 10.22.2020 15:13
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 675580-007 | | 675580-008 | | 675580-009 | | 675580-010 | | 675580-011 | | 675580-012 | |
| | ***Field Id:*** | T-1 (5.5') | | T-2 (0-1') | | T-2 (1') | | T-2 (2') | | T-2 (3') | | T-2 (4') | |
| | ***Depth:*** | | | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | | | 10.21.2020 09:00 | | | | | | | | | |
| | ***Analyzed:*** | | | 10.21.2020 14:49 | | | | | | | | | |
| | ***Units/RL:*** | | | mg/kg | RL | | | | | | | | |
| Benzene | | | | <0.00201 | 0.00201 | | | | | | | | |
| Toluene | | | | <0.00201 | 0.00201 | | | | | | | | |
| Ethylbenzene | | | | <0.00201 | 0.00201 | | | | | | | | |
| m,p-Xylenes | | | | <0.00402 | 0.00402 | | | | | | | | |
| o-Xylene | | | | <0.00201 | 0.00201 | | | | | | | | |
| Total Xylenes | | | | <0.00201 | 0.00201 | | | | | | | | |
| Total BTEX | | | | <0.00201 | 0.00201 | | | | | | | | |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | |
| | ***Analyzed:*** | 10.20.2020 18:42 | | 10.20.2020 18:48 | | 10.20.2020 18:54 | | 10.20.2020 19:01 | | 10.20.2020 19:20 | | 10.20.2020 19:26 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 90.6 | 5.00 | 4810 | 25.2 | 7960 | 49.8 | 5800 | 50.0 | 4760 | 25.2 | 2140 | 24.8 |
| **TPH By SW8015 Mod** | ***Extracted:*** | | | 10.20.2020 17:00 | | | | | | | | | |
| | ***Analyzed:*** | | | 10.21.2020 04:46 | | | | | | | | | |
| | ***Units/RL:*** | | | mg/kg | RL | | | | | | | | |
| Gasoline Range Hydrocarbons (GRO) | | | | <49.8 | 49.8 | | | | | | | | |
| Diesel Range Organics (DRO) | | | | <49.8 | 49.8 | | | | | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | | | <49.8 | 49.8 | | | | | | | | |
| Total TPH | | | | <49.8 | 49.8 | | | | | | | | |

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# Certificate of Analysis Summary 675580

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

**Date Received in Lab:** Tue 10.20.2020 13:26
**Report Date:** 10.22.2020 15:13
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 675580-013 | | 675580-014 | | 675580-015 | | 675580-016 | | 675580-017 | | 675580-018 | |
| | ***Field Id:*** | T-2 (5') | | T-2 (5.5') | | T-3 (0-1') | | T-3 (1') | | T-3 (2') | | T-3 (3') | |
| | ***Depth:*** | | | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | | | | | 10.21.2020 09:00 | | | | | | | |
| | ***Analyzed:*** | | | | | 10.21.2020 15:11 | | | | | | | |
| | ***Units/RL:*** | | | | | mg/kg | RL | | | | | | |
| Benzene | | | | | | <0.00200 | 0.00200 | | | | | | |
| Toluene | | | | | | <0.00200 | 0.00200 | | | | | | |
| Ethylbenzene | | | | | | <0.00200 | 0.00200 | | | | | | |
| m,p-Xylenes | | | | | | <0.00401 | 0.00401 | | | | | | |
| o-Xylene | | | | | | <0.00200 | 0.00200 | | | | | | |
| Total Xylenes | | | | | | <0.00200 | 0.00200 | | | | | | |
| Total BTEX | | | | | | <0.00200 | 0.00200 | | | | | | |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | | 10.20.2020 16:40 | |
| | ***Analyzed:*** | 10.20.2020 19:45 | | 10.20.2020 19:51 | | 10.20.2020 19:58 | | 10.20.2020 20:04 | | 10.20.2020 20:10 | | 10.20.2020 20:17 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 510 | 4.97 | 239 | 5.04 | 4290 | 25.0 | 1910 | 25.0 | 3380 | 25.2 | 6870 | 49.6 |
| **TPH By SW8015 Mod** | ***Extracted:*** | | | | | 10.20.2020 17:00 | | | | | | | |
| | ***Analyzed:*** | | | | | 10.21.2020 05:05 | | | | | | | |
| | ***Units/RL:*** | | | | | mg/kg | RL | | | | | | |
| Gasoline Range Hydrocarbons (GRO) | | | | | | <50.0 | 50.0 | | | | | | |
| Diesel Range Organics (DRO) | | | | | | <50.0 | 50.0 | | | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | | | | | <50.0 | 50.0 | | | | | | |
| Total TPH | | | | | | <50.0 | 50.0 | | | | | | |

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# Certificate of Analysis Summary 675580

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

**Date Received in Lab:** Tue 10.20.2020 13:26
**Report Date:** 10.22.2020 15:13
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 675580-019 | | 675580-020 | | 675580-021 | | 675580-022 | | 675580-023 | | 675580-024 | |
| | ***Field Id:*** | T-3 (4') | | T-3 (5') | | T-3 (5.5') | | T-3 (6') | | T-4 (0-1') | | T-4 (1') | |
| | ***Depth:*** | | | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | | 10.19.2020 00:00 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | | | | | | | | | 10.21.2020 09:00 | | | |
| | ***Analyzed:*** | | | | | | | | | 10.21.2020 15:32 | | | |
| | ***Units/RL:*** | | | | | | | | | mg/kg | RL | | |
| Benzene | | | | | | | | | | <0.00200 | 0.00200 | | |
| Toluene | | | | | | | | | | <0.00200 | 0.00200 | | |
| Ethylbenzene | | | | | | | | | | <0.00200 | 0.00200 | | |
| m,p-Xylenes | | | | | | | | | | <0.00399 | 0.00399 | | |
| o-Xylene | | | | | | | | | | <0.00200 | 0.00200 | | |
| Total Xylenes | | | | | | | | | | <0.00200 | 0.00200 | | |
| Total BTEX | | | | | | | | | | <0.00200 | 0.00200 | | |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | 10.20.2020 16:40 | | 10.20.2020 17:00 | | 10.20.2020 17:00 | | 10.20.2020 17:00 | | 10.20.2020 17:00 | | 10.20.2020 17:00 | |
| | ***Analyzed:*** | 10.20.2020 20:23 | | 10.20.2020 22:58 | | 10.20.2020 23:14 | | 10.20.2020 23:19 | | 10.20.2020 23:24 | | 10.20.2020 23:29 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 4670 | 25.0 | 1860 X | 25.1 | 583 | 4.96 | 232 | 5.00 | 4960 | 25.2 | 4800 | 25.0 |
| **TPH By SW8015 Mod** | ***Extracted:*** | | | | | | | | | 10.20.2020 17:00 | | | |
| | ***Analyzed:*** | | | | | | | | | 10.21.2020 05:24 | | | |
| | ***Units/RL:*** | | | | | | | | | mg/kg | RL | | |
| Gasoline Range Hydrocarbons (GRO) | | | | | | | | | | <50.0 | 50.0 | | |
| Diesel Range Organics (DRO) | | | | | | | | | | <50.0 | 50.0 | | |
| Motor Oil Range Hydrocarbons (MRO) | | | | | | | | | | <50.0 | 50.0 | | |
| Total TPH | | | | | | | | | | <50.0 | 50.0 | | |

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# Certificate of Analysis Summary 675580

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

**Date Received in Lab:** Tue 10.20.2020 13:26
**Report Date:** 10.22.2020 15:13
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 675580-025 | | 675580-026 | | | | | | | | | |
| | ***Field Id:*** | T-4 (2') | | T-4 (2.5') | | | | | | | | | |
| | ***Depth:*** | | | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | | | | | | | | |
| | ***Sampled:*** | 10.19.2020 00:00 | | 10.19.2020 00:00 | | | | | | | | | |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | 10.20.2020 17:00 | | 10.20.2020 17:00 | | | | | | | | | |
| | ***Analyzed:*** | 10.20.2020 23:45 | | 10.20.2020 23:51 | | | | | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | | | | | | | | |
| Chloride | | 290 | 4.96 | 206 | 5.03 | | | | | | | | |

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10.22.2020

Project Manager: **Mike Carmona**
**Tetra Tech- Midland**
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **675580**
**Falcon Riser**
Project Address: Lea County, New Mexico

**Mike Carmona**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 675580. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 675580 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

**Jessica Kramer**
Project Manager

*A Small Business and Minority Company*

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# Sample Cross Reference 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| T-1 (0-1') | S | 10.19.2020 00:00 | | 675580-001 |
| T-1 (1') | S | 10.19.2020 00:00 | | 675580-002 |
| T-1 (2) | S | 10.19.2020 00:00 | | 675580-003 |
| T-1 (3') | S | 10.19.2020 00:00 | | 675580-004 |
| T-1 (4') | S | 10.19.2020 00:00 | | 675580-005 |
| T-1 (5') | S | 10.19.2020 00:00 | | 675580-006 |
| T-1 (5.5') | S | 10.19.2020 00:00 | | 675580-007 |
| T-2 (0-1') | S | 10.19.2020 00:00 | | 675580-008 |
| T-2 (1') | S | 10.19.2020 00:00 | | 675580-009 |
| T-2 (2') | S | 10.19.2020 00:00 | | 675580-010 |
| T-2 (3') | S | 10.19.2020 00:00 | | 675580-011 |
| T-2 (4') | S | 10.19.2020 00:00 | | 675580-012 |
| T-2 (5') | S | 10.19.2020 00:00 | | 675580-013 |
| T-2 (5.5') | S | 10.19.2020 00:00 | | 675580-014 |
| T-3 (0-1') | S | 10.19.2020 00:00 | | 675580-015 |
| T-3 (1') | S | 10.19.2020 00:00 | | 675580-016 |
| T-3 (2') | S | 10.19.2020 00:00 | | 675580-017 |
| T-3 (3') | S | 10.19.2020 00:00 | | 675580-018 |
| T-3 (4') | S | 10.19.2020 00:00 | | 675580-019 |
| T-3 (5') | S | 10.19.2020 00:00 | | 675580-020 |
| T-3 (5.5') | S | 10.19.2020 00:00 | | 675580-021 |
| T-3 (6') | S | 10.19.2020 00:00 | | 675580-022 |
| T-4 (0-1') | S | 10.19.2020 00:00 | | 675580-023 |
| T-4 (1') | S | 10.19.2020 00:00 | | 675580-024 |
| T-4 (2') | S | 10.19.2020 00:00 | | 675580-025 |
| T-4 (2.5') | S | 10.19.2020 00:00 | | 675580-026 |

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# CASE NARRATIVE

***Client Name: Tetra Tech- Midland***

***Project Name: Falcon Riser***

Project ID: *212C-MD-02330*
Work Order Number(s): *675580*

Report Date: *10.22.2020*
Date Received: *10.20.2020*

**Sample receipt non conformances and comments:**

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3140193 Inorganic Anions by EPA 300/300.1

Lab Sample ID 675581-004 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: 675580-020, -021, -022, -023, -024, -025, -026.

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

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **T-1 (0-1')** Matrix: Soil Date Received:10.20.2020 13:26

Lab Sample Id: 675580-001 Date Collected: 10.19.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.20.2020 16:00 % Moisture:

Seq Number: 3140188 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **4880** | 49.9 | mg/kg | 10.20.2020 22:26 | | 10 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.20.2020 17:00 % Moisture:

Seq Number: 3140234 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 10.21.2020 03:49 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 10.21.2020 03:49 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 10.21.2020 03:49 | U | 1 |
| Total TPH | PHC635 | <50.0 | 50.0 | mg/kg | 10.21.2020 03:49 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 104 | % | 70-130 | 10.21.2020 03:49 | |
| o-Terphenyl | 84-15-1 | 117 | % | 70-130 | 10.21.2020 03:49 | |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **T-1 (0-1')** Matrix: Soil Date Received:10.20.2020 13:26

Lab Sample Id: 675580-001 Date Collected: 10.19.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 10.21.2020 09:00 % Moisture:

Seq Number: 3140290 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Benzene** | 71-43-2 | **0.0898** | 0.00199 | mg/kg | 10.21.2020 12:33 | | 1 |
| **Benzene** | 71-43-2 | **0.0849** | 0.00199 | mg/kg | 10.21.2020 12:54 | | 1 |
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 14:28 | U | 1 |
| **Toluene** | 108-88-3 | **0.0925** | 0.00199 | mg/kg | 10.21.2020 12:33 | | 1 |
| **Toluene** | 108-88-3 | **0.0883** | 0.00199 | mg/kg | 10.21.2020 12:54 | | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 14:28 | U | 1 |
| **Ethylbenzene** | 100-41-4 | **0.0879** | 0.00199 | mg/kg | 10.21.2020 12:33 | | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 14:28 | U | 1 |
| **Ethylbenzene** | 100-41-4 | **0.0807** | 0.00199 | mg/kg | 10.21.2020 12:54 | | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 10.21.2020 14:28 | U | 1 |
| **m,p-Xylenes** | 179601-23-1 | **0.176** | 0.00398 | mg/kg | 10.21.2020 12:54 | | 1 |
| **m,p-Xylenes** | 179601-23-1 | **0.184** | 0.00398 | mg/kg | 10.21.2020 12:33 | | 1 |
| **o-Xylene** | 95-47-6 | **0.0893** | 0.00199 | mg/kg | 10.21.2020 12:33 | | 1 |
| **o-Xylene** | 95-47-6 | **0.0830** | 0.00199 | mg/kg | 10.21.2020 12:54 | | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 14:28 | U | 1 |
| **Total Xylenes** | 1330-20-7 | **0.273** | 0.00199 | mg/kg | 10.21.2020 12:33 | | 1 |
| **Total Xylenes** | 1330-20-7 | **0.259** | 0.00199 | mg/kg | 10.21.2020 12:54 | | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 10.21.2020 14:28 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 10.21.2020 14:28 | U | 1 |
| **Total BTEX** | | **0.544** | 0.00199 | mg/kg | 10.21.2020 12:33 | | 1 |
| **Total BTEX** | | **0.513** | 0.00199 | mg/kg | 10.21.2020 12:54 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 91 | % | 70-130 | 10.21.2020 12:54 | |
| 4-Bromofluorobenzene | 460-00-4 | 127 | % | 70-130 | 10.21.2020 12:54 | |
| 4-Bromofluorobenzene | 460-00-4 | 112 | % | 70-130 | 10.21.2020 14:28 | |
| 1,4-Difluorobenzene | 540-36-3 | 94 | % | 70-130 | 10.21.2020 12:33 | |
| 4-Bromofluorobenzene | 460-00-4 | 121 | % | 70-130 | 10.21.2020 12:33 | |
| 1,4-Difluorobenzene | 540-36-3 | 80 | % | 70-130 | 10.21.2020 14:28 | |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-1 (1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-002 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **9550** | 49.9 | mg/kg | 10.20.2020 17:57 | | 10 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-1 (2)** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-003 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **3080** | 24.8 | mg/kg | 10.20.2020 18:03 | | 5 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-1 (3')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-004 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **2850** | 25.1 | mg/kg | 10.20.2020 18:10 | | 5 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-1 (4')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-005 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **526** | 5.00 | mg/kg | 10.20.2020 18:29 | | 1 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-1 (5')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-006 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **345** | 5.00 | mg/kg | 10.20.2020 18:35 | | 1 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-1 (5.5')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-007 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **90.6** | 5.00 | mg/kg | 10.20.2020 18:42 | | 1 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **T-2 (0-1')** Matrix: Soil Date Received:10.20.2020 13:26

Lab Sample Id: 675580-008 Date Collected: 10.19.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: SPC

Analyst: CHE Date Prep: 10.20.2020 16:40 % Moisture:

Seq Number: 3140190 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **4810** | 25.2 | mg/kg | 10.20.2020 18:48 | | 5 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.20.2020 17:00 % Moisture:

Seq Number: 3140234 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.8 | 49.8 | mg/kg | 10.21.2020 04:46 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.8 | 49.8 | mg/kg | 10.21.2020 04:46 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.8 | 49.8 | mg/kg | 10.21.2020 04:46 | U | 1 |
| Total TPH | PHC635 | <49.8 | 49.8 | mg/kg | 10.21.2020 04:46 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 102 | % | 70-130 | 10.21.2020 04:46 | |
| o-Terphenyl | 84-15-1 | 115 | % | 70-130 | 10.21.2020 04:46 | |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-2 (0-1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-008 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 10.21.2020 09:00 | % Moisture: | |
| Seq Number: | 3140290 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00201 | 0.00201 | mg/kg | 10.21.2020 14:49 | U | 1 |
| Toluene | 108-88-3 | <0.00201 | 0.00201 | mg/kg | 10.21.2020 14:49 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00201 | 0.00201 | mg/kg | 10.21.2020 14:49 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00402 | 0.00402 | mg/kg | 10.21.2020 14:49 | U | 1 |
| o-Xylene | 95-47-6 | <0.00201 | 0.00201 | mg/kg | 10.21.2020 14:49 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00201 | 0.00201 | mg/kg | 10.21.2020 14:49 | U | 1 |
| Total BTEX | | <0.00201 | 0.00201 | mg/kg | 10.21.2020 14:49 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 88 | % | 70-130 | 10.21.2020 14:49 | |
| 4-Bromofluorobenzene | 460-00-4 | 114 | % | 70-130 | 10.21.2020 14:49 | |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-2 (1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-009 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **7960** | 49.8 | mg/kg | 10.20.2020 18:54 | | 10 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-2 (2')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-010 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **5800** | 50.0 | mg/kg | 10.20.2020 19:01 | | 10 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-2 (3')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-011 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **4760** | 25.2 | mg/kg | 10.20.2020 19:20 | | 5 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-2 (4')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-012 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **2140** | 24.8 | mg/kg | 10.20.2020 19:26 | | 5 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-2 (5')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-013 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **510** | 4.97 | mg/kg | 10.20.2020 19:45 | | 1 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-2 (5.5')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-014 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **239** | 5.04 | mg/kg | 10.20.2020 19:51 | | 1 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-3 (0-1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-015 | Date Collected: | 10.19.2020 00:00 | | |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **4290** | 25.0 | mg/kg | 10.20.2020 19:58 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH By SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DVM | | | | |
| Analyst: | ARM | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140234 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 10.21.2020 05:05 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 10.21.2020 05:05 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 10.21.2020 05:05 | U | 1 |
| Total TPH | PHC635 | <50.0 | 50.0 | mg/kg | 10.21.2020 05:05 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 104 | % | 70-130 | 10.21.2020 05:05 | |
| o-Terphenyl | 84-15-1 | 116 | % | 70-130 | 10.21.2020 05:05 | |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-3 (0-1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-015 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 10.21.2020 09:00 | % Moisture: | |
| Seq Number: | 3140290 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:11 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:11 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:11 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00401 | 0.00401 | mg/kg | 10.21.2020 15:11 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:11 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:11 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:11 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 89 | % | 70-130 | 10.21.2020 15:11 | |
| 4-Bromofluorobenzene | 460-00-4 | 112 | % | 70-130 | 10.21.2020 15:11 | |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-3 (1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-016 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1910** | 25.0 | mg/kg | 10.20.2020 20:04 | | 5 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-3 (2')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-017 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **3380** | 25.2 | mg/kg | 10.20.2020 20:10 | | 5 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-3 (3')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-018 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **6870** | 49.6 | mg/kg | 10.20.2020 20:17 | | 10 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-3 (4')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-019 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | SPC | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 16:40 | % Moisture: | |
| Seq Number: | 3140190 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **4670** | 25.0 | mg/kg | 10.20.2020 20:23 | | 5 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-3 (5')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-020 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140193 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1860** | 25.1 | mg/kg | 10.20.2020 22:58 | X | 5 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-3 (5.5')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-021 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140193 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **583** | 4.96 | mg/kg | 10.20.2020 23:14 | | 1 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-3 (6')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-022 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140193 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **232** | 5.00 | mg/kg | 10.20.2020 23:19 | | 1 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **T-4 (0-1')** Matrix: Soil Date Received:10.20.2020 13:26

Lab Sample Id: 675580-023 Date Collected: 10.19.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 10.20.2020 17:00 % Moisture:

Seq Number: 3140193 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **4960** | 25.2 | mg/kg | 10.20.2020 23:24 | | 5 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 10.20.2020 17:00 % Moisture:

Seq Number: 3140234 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 10.21.2020 05:24 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 10.21.2020 05:24 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 10.21.2020 05:24 | U | 1 |
| Total TPH | PHC635 | <50.0 | 50.0 | mg/kg | 10.21.2020 05:24 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 100 | % | 70-130 | 10.21.2020 05:24 | |
| o-Terphenyl | 84-15-1 | 113 | % | 70-130 | 10.21.2020 05:24 | |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-4 (0-1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-023 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 10.21.2020 09:00 | % Moisture: | |
| Seq Number: | 3140290 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:32 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:32 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:32 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 10.21.2020 15:32 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:32 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:32 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 10.21.2020 15:32 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 87 | % | 70-130 | 10.21.2020 15:32 | |
| 4-Bromofluorobenzene | 460-00-4 | 115 | % | 70-130 | 10.21.2020 15:32 | |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-4 (1')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-024 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140193 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **4800** | 25.0 | mg/kg | 10.20.2020 23:29 | | 5 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-4 (2')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-025 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140193 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **290** | 4.96 | mg/kg | 10.20.2020 23:45 | | 1 |

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# Certificate of Analytical Results 675580

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **T-4 (2.5')** | Matrix: | Soil | Date Received: | 10.20.2020 13:26 |
| Lab Sample Id: | 675580-026 | Date Collected: | 10.19.2020 00:00 | | |
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 10.20.2020 17:00 | % Moisture: | |
| Seq Number: | 3140193 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **206** | 5.03 | mg/kg | 10.20.2020 23:51 | | 1 |

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# 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

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# QC Summary 675580

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140188 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713598-1-BLK — LCS Sample Id: 7713598-1-BKS — LCSD Sample Id: 7713598-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 253 | 101 | 252 | 101 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 19:53 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140190 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713600-1-BLK — LCS Sample Id: 7713600-1-BKS — LCSD Sample Id: 7713600-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 258 | 103 | 258 | 103 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 17:19 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140193 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713603-1-BLK — LCS Sample Id: 7713603-1-BKS — LCSD Sample Id: 7713603-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 253 | 101 | 251 | 100 | 90-110 | 1 | 20 | mg/kg | 10.20.2020 22:47 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140188 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675578-001 — MS Sample Id: 675578-001 S — MSD Sample Id: 675578-001 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 | 250 | 275 | 105 | 275 | 105 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 20:09 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140188 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675578-011 — MS Sample Id: 675578-011 S — MSD Sample Id: 675578-011 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13.3 | 250 | 288 | 110 | 290 | 111 | 90-110 | 1 | 20 | mg/kg | 10.20.2020 21:23 | X |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140190 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675579-002 — MS Sample Id: 675579-002 S — MSD Sample Id: 675579-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13.3 | 250 | 275 | 105 | 275 | 105 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 17:38 | |

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

# QC Summary 675580



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## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140190 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675580-010 — MS Sample Id: 675580-010 S — MSD Sample Id: 675580-010 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5800 | 2500 | 8370 | 103 | 8360 | 102 | 90-110 | 0 | 20 | mg/kg | 10.20.2020 19:07 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140193 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675580-020 — MS Sample Id: 675580-020 S — MSD Sample Id: 675580-020 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1860 | 1260 | 3240 | 110 | 3270 | 112 | 90-110 | 1 | 20 | mg/kg | 10.20.2020 23:03 | X |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3140193 — Matrix: Soil — Date Prep: 10.20.2020
Parent Sample Id: 675581-004 — MS Sample Id: 675581-004 S — MSD Sample Id: 675581-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4420 | 1250 | 5780 | 109 | 5780 | 109 | 90-110 | 0 | 20 | mg/kg | 10.21.2020 00:17 | |

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3140234 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713615-1-BLK — LCS Sample Id: 7713615-1-BKS — LCSD Sample Id: 7713615-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | <50.0 | 1000 | 1130 | 113 | 961 | 96 | 70-130 | 16 | 20 | mg/kg | 10.21.2020 03:11 | |
| Diesel Range Organics (DRO) | <50.0 | 1000 | 1120 | 112 | 982 | 98 | 70-130 | 13 | 20 | mg/kg | 10.21.2020 03:11 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 112 | | 116 | | 126 | | 70-130 | % | 10.21.2020 03:11 |
| o-Terphenyl | 129 | | 126 | | 119 | | 70-130 | % | 10.21.2020 03:11 |

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3140234 — Matrix: Solid — Date Prep: 10.20.2020
MB Sample Id: 7713615-1-BLK

| Parameter | MB Result | Units | Analysis Date | Flag |
|---|---|---|---|---|
| Motor Oil Range Hydrocarbons (MRO) | <50.0 | mg/kg | 10.21.2020 02:52 | |

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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# QC Summary 675580

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** **TPH By SW8015 Mod** Prep Method: SW8015P

Seq Number: 3140234 Matrix: Soil Date Prep: 10.20.2020

Parent Sample Id: 675580-001 MS Sample Id: 675580-001 S MSD Sample Id: 675580-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | <49.9 | 997 | 890 | 89 | 914 | 91 | 70-130 | 3 | 20 | mg/kg | 10.21.2020 04:08 | |
| Diesel Range Organics (DRO) | <49.9 | 997 | 905 | 91 | 916 | 92 | 70-130 | 1 | 20 | mg/kg | 10.21.2020 04:08 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 118 | | 118 | | 70-130 | % | 10.21.2020 04:08 |
| o-Terphenyl | 113 | | 118 | | 70-130 | % | 10.21.2020 04:08 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3140290 Matrix: Solid Date Prep: 10.21.2020

MB Sample Id: 7713702-1-BLK LCS Sample Id: 7713702-1-BKS LCSD Sample Id: 7713702-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | 0.100 | 0.0984 | 98 | 0.0961 | 96 | 70-130 | 2 | 35 | mg/kg | 10.21.2020 11:52 | |
| Toluene | <0.00200 | 0.100 | 0.101 | 101 | 0.103 | 103 | 70-130 | 2 | 35 | mg/kg | 10.21.2020 11:52 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.0976 | 98 | 0.0964 | 96 | 70-130 | 1 | 35 | mg/kg | 10.21.2020 11:52 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.210 | 105 | 0.207 | 104 | 70-130 | 1 | 35 | mg/kg | 10.21.2020 11:52 | |
| o-Xylene | <0.00200 | 0.100 | 0.0989 | 99 | 0.0979 | 98 | 70-130 | 1 | 35 | mg/kg | 10.21.2020 11:52 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 81 | | 92 | | 91 | | 70-130 | % | 10.21.2020 11:52 |
| 4-Bromofluorobenzene | 101 | | 124 | | 123 | | 70-130 | % | 10.21.2020 11:52 |

| | | | |
|---|---|---|---|
| MS/MSD Percent Recovery | [D] = 100*(C-A) / B | LCS = Laboratory Control Sample | MS = Matrix Spike |
| Relative Percent Difference | RPD = 200* \| (C-E) / (C+E) \| | A = Parent Result | B = Spike Added |
| LCS/LCSD Recovery | [D] = 100 * (C) / [B] | C = MS/LCS Result | D = MSD/LCSD % Rec |
| Log Difference | Log Diff. = Log(Sample Duplicate) - Log(Original Sample) | E = MSD/LCSD Result | |

Analysis Request of Chain of Custody Record

675580

Page 1 of 3

# Tetra Tech, Inc.

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

| | |
|---|---|
| Client Name: EOG | Site Manager: Mike Carmona |
| Project Name: Falcon Riser | |
| Project Location: (county, state) Lea County, New Mexico | Project #: 212C-MD-02330 |
| Invoice to: EOG- Galan Kelley | |
| Receiving Laboratory: Xenco | Sampler Signature: Devin Dominguez |
| Comments: | |

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING DATE | SAMPLING TIME | MATRIX: WATER | MATRIX: SOIL | MATRIX: | PRESERVATIVE METHOD: HCL | PRESERVATIVE METHOD: $HNO_3$ | PRESERVATIVE METHOD: ICE | PRESERVATIVE METHOD: None | PRESERVATIVE METHOD: | # CONTAINERS | FILTERED (Y/N) | BTEX 8021B / BTEX 8260B | TPH TX1005 (Ext to C35) | TPH 8015M ( GRO - DRO - ORO - MRO) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8260B / 624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082 / 608 | NORM | PLM (Asbestos) | Chloride | Chloride Sulfate TDS | General Water Chemistry (see attached list) | Anion/Cation Balance | TPH 8015R | | | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | T-1 (0-1') | 10/19/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | T-1 (1') | 10/19/2020 | | | X | | | | X | | | 1 | N | | | | | | | | | | | | | | | X | | | | | | | |
| | T-1 (2') | 10/19/2020 | | | X | | | | X | | | 1 | N | | | | | | | | | | | | | | | X | | | | | | | |
| | T-1 (3') | 10/19/2020 | | | X | | | | X | | | 1 | N | | | | | | | | | | | | | | | X | | | | | | | |
| | T-1 (4') | 10/19/2020 | | | X | | | | X | | | 1 | N | | | | | | | | | | | | | | | X | | | | | | | |
| | T-1 (5') | 10/19/2020 | | | X | | | | X | | | 1 | N | | | | | | | | | | | | | | | X | | | | | | | |
| | T-1 (5.5') | 10/19/2020 | | | X | | | | X | | | 1 | N | | | | | | | | | | | | | | | X | | | | | | | |
| | T-2 (0-1') | 10/19/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | T-2 (1') | 10/19/2020 | | | X | | | | X | | | 1 | N | | | | | | | | | | | | | | | X | | | | | | | |
| | T-2 (2') | 10/19/2020 | | | X | | | | X | | | 1 | N | | | | | | | | | | | | | | | X | | | | | | | |

ANALYSIS REQUEST
(Circle or Specify Method No.)

| Relinquished by: | Date: | Time: | Received by: | Date: | Time: |
|---|---|---|---|---|---|
| | 10/20 | | | 10/20/20 | 13:26 |
| Relinquished by: | Date: | Time: | Received by: | Date: | Time: |
| Relinquished by: | Date: | Time: | Received by: | Date: | Time: |

LAB USE ONLY

Sample Temperature

2-9/3.4

REMARKS:

- [X] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

675580 Page 2 of 3

# Tetra Tech, Inc.

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

| | |
|---|---|
| Client Name: EOG | Site Manager: Mike Carmona |
| Project Name: Falcon Riser | |
| Project Location: (county, state) Lea County, New Mexico | Project #: 212C-MD-02330 |
| Invoice to: EOG- Galan Kelley | |
| Receiving Laboratory: Xenco | Sampler Signature: Devin Dominguez |
| Comments: | |

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING DATE (YEAR: 2020) | SAMPLING TIME | MATRIX: WATER | MATRIX: SOIL | MATRIX: | PRESERVATIVE METHOD: HCL | PRESERVATIVE METHOD: $HNO_3$ | PRESERVATIVE METHOD: ICE | PRESERVATIVE METHOD: None | PRESERVATIVE METHOD: | # CONTAINERS | FILTERED (Y/N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | T-2 (3') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-2 (4') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-2 (5') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-2 (5.5') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-3 (0-1') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-3 (1') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-3 (2') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-3 (3') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-3 (4') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-3 (5') | 10/19/2020 | | | X | | | | X | | | 1 | N |

ANALYSIS REQUEST (Circle or Specify Method No.)

| BTEX 8021B BTEX 8260B | TPH TX1005 (Ext to C35) | TPH 8015M ( GRO - DRO - ORO - MRO) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8260B / 624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082 / 608 | NORM | PLM (Asbestos) | Chloride | Chloride Sulfate TDS | General Water Chemistry (see attached list) | Anion/Cation Balance | TPH 8015R | | | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | X | | | | | | | |
| X | | X | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | X | | | | | | | |

| Relinquished by: | Date: | Time: | Received by: | Date: | Time: |
|---|---|---|---|---|---|
| | 10/20 | | | 10/20/20 | 13:26 |
| Relinquished by: | Date: | Time: | Received by: | Date: | Time: |
| Relinquished by: | Date: | Time: | Received by: | Date: | Time: |

LAB USE ONLY

Sample Temperature: 2.9/3.4

REMARKS:

- [X] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

675580

Page 3 of 3

# Tetra Tech, Inc.

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

| | |
|---|---|
| Client Name: EOG | Site Manager: Mike Carmona |
| Project Name: Falcon Riser | |
| Project Location: (county, state) Lea County, New Mexico | Project #: 212C-MD-02330 |
| Invoice to: EOG- Galan Kelley | |
| Receiving Laboratory: Xenco | Sampler Signature: Devin Dominguez |
| Comments: | |

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING DATE | SAMPLING TIME | MATRIX: WATER | MATRIX: SOIL | MATRIX: | PRESERVATIVE METHOD: HCL | PRESERVATIVE METHOD: $HNO_3$ | PRESERVATIVE METHOD: ICE | PRESERVATIVE METHOD: None | PRESERVATIVE METHOD: | # CONTAINERS | FILTERED (Y/N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | T-3 (5.5') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-3 (6') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-4 (0-1') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-4 (1') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-4 (2') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | T-4 (2.5') | 10/19/2020 | | | X | | | | X | | | 1 | N |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

ANALYSIS REQUEST
(Circle or Specify Method No.)

| LAB # | BTEX 8021B / BTEX 8260B | TPH TX1005 (Ext to C35) | TPH 8015M ( GRO - DRO - ORO - MRO) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8260B / 624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082 / 608 | NORM | PLM (Asbestos) | Chloride | Chloride Sulfate TDS | General Water Chemistry (see attached list) | Anion/Cation Balance | TPH 8015R | | | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | | X | | | | | | | |
| | X | | X | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | | X | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | |

Relinquished by: Date: 10/20 Time:

Received by: Date: 10/20/20 Time: 13:26

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

LAB USE ONLY

Sample Temperature 2.9/3.4

REMARKS:

- [X] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

# Eurofins Xenco, LLC

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** Tetra Tech- Midland

**Date/ Time Received:** 10.20.2020 01.26.00 PM

**Work Order #:** 675580

**Acceptable Temperature Range: 0 - 6 degC**
**Air and Metal samples Acceptable Range: Ambient**

**Temperature Measuring device used : IR-8**

| Sample Receipt Checklist | | Comments |
|---|---|---|
| #1 *Temperature of cooler(s)? | 3.4 | |
| #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** | BTEX was in bulk container |
| #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: 10.20.2020
Brianna Teel

**Checklist reviewed by:** Jessica Kramer Date: 10.21.2020
Jessica Kramer

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# Analytical Report 678613

## for

## Tetra Tech- Midland

**Project Manager: Mike Carmona**

**Falcon Riser**

**212C-MD-02330**

**11.30.2020**

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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11.30.2020

Project Manager: **Mike Carmona**
**Tetra Tech- Midland**
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **678613**
**Falcon Riser**
Project Address: Lea County, New Mexico

**Mike Carmona**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 678613. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 678613 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

**Jessica Kramer**
Project Manager

*A Small Business and Minority Company*

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

eurofins | Environment Testing Xenco

# Certificate of Analysis Summary 678613

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

Revised

**Date Received in Lab:** Fri 11.20.2020 14:19
**Report Date:** 11.30.2020 07:49
**Project Manager:** Jessica Kramer

| Analysis Requested | | 678613-001 | | 678613-002 | | 678613-003 | | 678613-004 | | 678613-005 | | 678613-006 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lab Id: | 678613-001 | | 678613-002 | | 678613-003 | | 678613-004 | | 678613-005 | | 678613-006 | |
| | Field Id: | Bottomhole-1 (4') | | Bottomhole-2 (4') | | Bottomhole-3 (4') | | Bottomhole-4 (4') | | Bottomhole-5 (4') | | Bottomhole-6 (4') | |
| | Depth: | | | | | | | | | | | | |
| | Matrix: | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | Sampled: | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | |
| **BTEX by EPA 8021B** | Extracted: | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | |
| | Analyzed: | 11.21.2020 15:06 | | 11.21.2020 16:29 | | 11.21.2020 16:49 | | 11.21.2020 17:10 | | 11.21.2020 17:30 | | 11.21.2020 17:51 | |
| | Units/RL: | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00201 | 0.00201 |
| Toluene | | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00201 | 0.00201 |
| Ethylbenzene | | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00201 | 0.00201 |
| m,p-Xylenes | | <0.00403 | 0.00403 | <0.00401 | 0.00401 | <0.00401 | 0.00401 | <0.00398 | 0.00398 | <0.00403 | 0.00403 | <0.00402 | 0.00402 |
| o-Xylene | | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00201 | 0.00201 |
| Total Xylenes | | <0.002020 | 0.002020 | <0.002000 | 0.002000 | <0.002000 | 0.002000 | <0.001990 | 0.001990 | <0.002020 | 0.002020 | <0.002010 | 0.002010 |
| Total BTEX | | <0.002020 | 0.002020 | <0.002000 | 0.002000 | <0.002000 | 0.002000 | <0.001990 | 0.001990 | <0.002020 | 0.002020 | <0.002010 | 0.002010 |
| **Inorganic Anions by EPA 300/300.1** | Extracted: | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | |
| | Analyzed: | 11.21.2020 15:58 | | 11.21.2020 16:14 | | 11.21.2020 16:19 | | 11.21.2020 16:24 | | 11.21.2020 16:30 | | 11.21.2020 16:35 | |
| | Units/RL: | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 13.8 | 4.95 | 17.6 | 5.05 | 12.4 | 4.98 | 15.9 | 5.03 | 14.5 | 4.97 | 11.8 | 5.03 |
| **TPH By SW8015 Mod** | Extracted: | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | |
| | Analyzed: | 11.25.2020 03:04 | | 11.25.2020 03:49 | | 11.25.2020 04:11 | | 11.25.2020 04:34 | | 11.25.2020 04:55 | | 11.25.2020 05:17 | |
| | Units/RL: | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <49.9 | 49.9 | <49.8 | 49.8 | <50.0 | 50.0 | <50.0 | 50.0 | <49.9 | 49.9 | <49.8 | 49.8 |
| Diesel Range Organics (DRO) | | <49.9 | 49.9 | <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) | | <49.9 | 49.9 | <49.8 | 49.8 | <50.0 | 50.0 | <50.0 | 50.0 | <49.9 | 49.9 | <49.8 | 49.8 |
| Total TPH | | <49.90 | 49.90 | <49.80 | 49.80 | <50.00 | 50.00 | <50.00 | 50.00 | <49.90 | 49.90 | <49.80 | 49.80 |

BRL - Below Reporting Limit

Jessica Kramer

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

eurofins | Environment Testing Xenco

# Certificate of Analysis Summary 678613

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

Revised

**Date Received in Lab:** Fri 11.20.2020 14:19
**Report Date:** 11.30.2020 07:49
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 678613-007 | | 678613-008 | | 678613-009 | | 678613-010 | | | | | |
| | ***Field Id:*** | Bottomhole-7 (4') | | Bottomhole-8 (4') | | Bottomhole-9 (3') | | Bottomhole-10 (3') | | | | | |
| | ***Depth:*** | | | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | | | | |
| | ***Sampled:*** | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | | | | | |
| | ***Analyzed:*** | 11.21.2020 18:11 | | 11.21.2020 18:32 | | 11.21.2020 18:52 | | 11.21.2020 19:13 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Benzene | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | | | | |
| Toluene | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | | | | |
| Ethylbenzene | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | | | | |
| m,p-Xylenes | | <0.00398 | 0.00398 | <0.00399 | 0.00399 | <0.00398 | 0.00398 | <0.00400 | 0.00400 | | | | |
| o-Xylene | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | | | | |
| Total Xylenes | | <0.001990 | 0.001990 | <0.002000 | 0.002000 | <0.001990 | 0.001990 | <0.002000 | 0.002000 | | | | |
| Total BTEX | | <0.001990 | 0.001990 | <0.002000 | 0.002000 | <0.001990 | 0.001990 | <0.002000 | 0.002000 | | | | |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | | | | | |
| | ***Analyzed:*** | 11.21.2020 16:40 | | 11.21.2020 16:56 | | 11.21.2020 17:01 | | 11.21.2020 17:17 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Chloride | | 13.8 | 5.00 | 17.4 | 5.05 | 14.3 | 5.05 | 23.5 | 5.05 | | | | |
| **TPH By SW8015 Mod** | ***Extracted:*** | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | | | | | |
| | ***Analyzed:*** | 11.25.2020 05:40 | | 11.25.2020 06:02 | | 11.25.2020 06:24 | | 11.25.2020 06:46 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Gasoline Range Hydrocarbons (GRO) | | <50.0 | 50.0 | <50.0 | 50.0 | <49.9 | 49.9 | <49.8 | 49.8 | | | | |
| Diesel Range Organics (DRO) | | <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 | <50.0 | 50.0 | <49.9 | 49.9 | <49.8 | 49.8 | | | | |
| Total TPH | | <50.00 | 50.00 | <50.00 | 50.00 | <49.90 | 49.90 | <49.80 | 49.80 | | | | |

BRL - Below Reporting Limit

Jessica Kramer

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

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# Sample Cross Reference 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| Bottomhole-1 (4') | S | 11.18.2020 00:00 | | 678613-001 |
| Bottomhole-2 (4') | S | 11.18.2020 00:00 | | 678613-002 |
| Bottomhole-3 (4') | S | 11.18.2020 00:00 | | 678613-003 |
| Bottomhole-4 (4') | S | 11.18.2020 00:00 | | 678613-004 |
| Bottomhole-5 (4') | S | 11.18.2020 00:00 | | 678613-005 |
| Bottomhole-6 (4') | S | 11.18.2020 00:00 | | 678613-006 |
| Bottomhole-7 (4') | S | 11.18.2020 00:00 | | 678613-007 |
| Bottomhole-8 (4') | S | 11.18.2020 00:00 | | 678613-008 |
| Bottomhole-9 (3') | S | 11.18.2020 00:00 | | 678613-009 |
| Bottomhole-10 (3') | S | 11.18.2020 00:00 | | 678613-010 |

# CASE NARRATIVE



eurofins | Environment Testing Xenco

***Client Name: Tetra Tech- Midland***

***Project Name: Falcon Riser***

Project ID: *212C-MD-02330*
Work Order Number(s): *678613*

Report Date: *11.30.2020*
Date Received: *11.20.2020*

**Sample receipt non conformances and comments:**

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3142949 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected. Samples affected are: 678612-001 S,678612-001 SD,678613-004,678613-005,678613-007,678613-009,678613-001,678613-003.

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-1 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-001 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **13.8** | 4.95 | mg/kg | 11.21.2020 15:58 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.9 | 49.9 | mg/kg | 11.25.2020 03:04 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.9 | 49.9 | mg/kg | 11.25.2020 03:04 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.9 | 49.9 | mg/kg | 11.25.2020 03:04 | U | 1 |
| Total TPH | PHC635 | <49.90 | 49.90 | mg/kg | 11.25.2020 03:04 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 104 | % | 70-130 | 11.25.2020 03:04 | |
| o-Terphenyl | 84-15-1 | 107 | % | 70-130 | 11.25.2020 03:04 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-1 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-001 Date Collected: 11.18.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 11.20.2020 17:30 % Moisture:

Seq Number: 3142949 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 15:06 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 15:06 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 15:06 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00403 | 0.00403 | mg/kg | 11.21.2020 15:06 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 15:06 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002020 | 0.002020 | mg/kg | 11.21.2020 15:06 | U | 1 |
| Total BTEX | | <0.002020 | 0.002020 | mg/kg | 11.21.2020 15:06 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 92 | % | 70-130 | 11.21.2020 15:06 | |
| 4-Bromofluorobenzene | 460-00-4 | 134 | % | 70-130 | 11.21.2020 15:06 | ** |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-2 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-002 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **17.6** | 5.05 | mg/kg | 11.21.2020 16:14 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.8 | 49.8 | mg/kg | 11.25.2020 03:49 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.8 | 49.8 | mg/kg | 11.25.2020 03:49 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.8 | 49.8 | mg/kg | 11.25.2020 03:49 | U | 1 |
| Total TPH | PHC635 | <49.80 | 49.80 | mg/kg | 11.25.2020 03:49 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 102 | % | 70-130 | 11.25.2020 03:49 | |
| o-Terphenyl | 84-15-1 | 99 | % | 70-130 | 11.25.2020 03:49 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-2 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-002 Date Collected: 11.18.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 11.20.2020 17:30 % Moisture:

Seq Number: 3142949 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 16:29 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 16:29 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 16:29 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00401 | 0.00401 | mg/kg | 11.21.2020 16:29 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 16:29 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002000 | 0.002000 | mg/kg | 11.21.2020 16:29 | U | 1 |
| Total BTEX | | <0.002000 | 0.002000 | mg/kg | 11.21.2020 16:29 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 89 | % | 70-130 | 11.21.2020 16:29 | |
| 4-Bromofluorobenzene | 460-00-4 | 120 | % | 70-130 | 11.21.2020 16:29 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-3 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-003 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **12.4** | 4.98 | mg/kg | 11.21.2020 16:19 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 11.25.2020 04:11 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 11.25.2020 04:11 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 11.25.2020 04:11 | U | 1 |
| Total TPH | PHC635 | <50.00 | 50.00 | mg/kg | 11.25.2020 04:11 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 107 | % | 70-130 | 11.25.2020 04:11 | |
| o-Terphenyl | 84-15-1 | 100 | % | 70-130 | 11.25.2020 04:11 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-3 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-003 Date Collected: 11.18.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 11.20.2020 17:30 % Moisture:

Seq Number: 3142949 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 16:49 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 16:49 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 16:49 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00401 | 0.00401 | mg/kg | 11.21.2020 16:49 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 16:49 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002000 | 0.002000 | mg/kg | 11.21.2020 16:49 | U | 1 |
| Total BTEX | | <0.002000 | 0.002000 | mg/kg | 11.21.2020 16:49 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 90 | % | 70-130 | 11.21.2020 16:49 | |
| 4-Bromofluorobenzene | 460-00-4 | 136 | % | 70-130 | 11.21.2020 16:49 | ** |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-4 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-004 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **15.9** | 5.03 | mg/kg | 11.21.2020 16:24 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 11.25.2020 04:34 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 11.25.2020 04:34 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 11.25.2020 04:34 | U | 1 |
| Total TPH | PHC635 | <50.00 | 50.00 | mg/kg | 11.25.2020 04:34 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 99 | % | 70-130 | 11.25.2020 04:34 | |
| o-Terphenyl | 84-15-1 | 95 | % | 70-130 | 11.25.2020 04:34 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-4 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-004 Date Collected: 11.18.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 11.20.2020 17:30 % Moisture:

Seq Number: 3142949 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 17:10 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 17:10 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 17:10 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 11.21.2020 17:10 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 17:10 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.001990 | 0.001990 | mg/kg | 11.21.2020 17:10 | U | 1 |
| Total BTEX | | <0.001990 | 0.001990 | mg/kg | 11.21.2020 17:10 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 88 | % | 70-130 | 11.21.2020 17:10 | |
| 4-Bromofluorobenzene | 460-00-4 | 139 | % | 70-130 | 11.21.2020 17:10 | ** |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-5 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-005 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **14.5** | 4.97 | mg/kg | 11.21.2020 16:30 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.9 | 49.9 | mg/kg | 11.25.2020 04:55 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.9 | 49.9 | mg/kg | 11.25.2020 04:55 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.9 | 49.9 | mg/kg | 11.25.2020 04:55 | U | 1 |
| Total TPH | PHC635 | <49.90 | 49.90 | mg/kg | 11.25.2020 04:55 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 108 | % | 70-130 | 11.25.2020 04:55 | |
| o-Terphenyl | 84-15-1 | 108 | % | 70-130 | 11.25.2020 04:55 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-5 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-005 Date Collected: 11.18.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 11.20.2020 17:30 % Moisture:

Seq Number: 3142949 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 17:30 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 17:30 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 17:30 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00403 | 0.00403 | mg/kg | 11.21.2020 17:30 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 17:30 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002020 | 0.002020 | mg/kg | 11.21.2020 17:30 | U | 1 |
| Total BTEX | | <0.002020 | 0.002020 | mg/kg | 11.21.2020 17:30 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 137 | % | 70-130 | 11.21.2020 17:30 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 90 | % | 70-130 | 11.21.2020 17:30 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-6 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-006 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **11.8** | 5.03 | mg/kg | 11.21.2020 16:35 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.8 | 49.8 | mg/kg | 11.25.2020 05:17 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.8 | 49.8 | mg/kg | 11.25.2020 05:17 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.8 | 49.8 | mg/kg | 11.25.2020 05:17 | U | 1 |
| Total TPH | PHC635 | <49.80 | 49.80 | mg/kg | 11.25.2020 05:17 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 114 | % | 70-130 | 11.25.2020 05:17 | |
| o-Terphenyl | 84-15-1 | 114 | % | 70-130 | 11.25.2020 05:17 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-6 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-006 Date Collected: 11.18.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 11.20.2020 17:30 % Moisture:

Seq Number: 3142949 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00201 | 0.00201 | mg/kg | 11.21.2020 17:51 | U | 1 |
| Toluene | 108-88-3 | <0.00201 | 0.00201 | mg/kg | 11.21.2020 17:51 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00201 | 0.00201 | mg/kg | 11.21.2020 17:51 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00402 | 0.00402 | mg/kg | 11.21.2020 17:51 | U | 1 |
| o-Xylene | 95-47-6 | <0.00201 | 0.00201 | mg/kg | 11.21.2020 17:51 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002010 | 0.002010 | mg/kg | 11.21.2020 17:51 | U | 1 |
| Total BTEX | | <0.002010 | 0.002010 | mg/kg | 11.21.2020 17:51 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 128 | % | 70-130 | 11.21.2020 17:51 | |
| 1,4-Difluorobenzene | 540-36-3 | 95 | % | 70-130 | 11.21.2020 17:51 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-7 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-007 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **13.8** | 5.00 | mg/kg | 11.21.2020 16:40 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 11.25.2020 05:40 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 11.25.2020 05:40 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 11.25.2020 05:40 | U | 1 |
| Total TPH | PHC635 | <50.00 | 50.00 | mg/kg | 11.25.2020 05:40 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 105 | % | 70-130 | 11.25.2020 05:40 | |
| o-Terphenyl | 84-15-1 | 103 | % | 70-130 | 11.25.2020 05:40 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-7 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-007 Date Collected: 11.18.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 11.20.2020 17:30 % Moisture:

Seq Number: 3142949 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 18:11 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 18:11 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 18:11 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 11.21.2020 18:11 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 18:11 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.001990 | 0.001990 | mg/kg | 11.21.2020 18:11 | U | 1 |
| Total BTEX | | <0.001990 | 0.001990 | mg/kg | 11.21.2020 18:11 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 94 | % | 70-130 | 11.21.2020 18:11 | |
| 4-Bromofluorobenzene | 460-00-4 | 131 | % | 70-130 | 11.21.2020 18:11 | ** |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-8 (4')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-008 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **17.4** | 5.05 | mg/kg | 11.21.2020 16:56 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 11.25.2020 06:02 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 11.25.2020 06:02 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 11.25.2020 06:02 | U | 1 |
| Total TPH | PHC635 | <50.00 | 50.00 | mg/kg | 11.25.2020 06:02 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 103 | % | 70-130 | 11.25.2020 06:02 | |
| o-Terphenyl | 84-15-1 | 100 | % | 70-130 | 11.25.2020 06:02 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-8 (4')**
Lab Sample Id: 678613-008

Matrix: Soil
Date Collected: 11.18.2020 00:00

Date Received:11.20.2020 14:19

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3142949

Prep Method: SW5035A
Date Prep: 11.20.2020 17:30
% Moisture:
Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 18:32 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 18:32 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 18:32 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 11.21.2020 18:32 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 18:32 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002000 | 0.002000 | mg/kg | 11.21.2020 18:32 | U | 1 |
| Total BTEX | | <0.002000 | 0.002000 | mg/kg | 11.21.2020 18:32 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 130 | % | 70-130 | 11.21.2020 18:32 | |
| 1,4-Difluorobenzene | 540-36-3 | 86 | % | 70-130 | 11.21.2020 18:32 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-9 (3')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-009 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **14.3** | 5.05 | mg/kg | 11.21.2020 17:01 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.9 | 49.9 | mg/kg | 11.25.2020 06:24 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.9 | 49.9 | mg/kg | 11.25.2020 06:24 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.9 | 49.9 | mg/kg | 11.25.2020 06:24 | U | 1 |
| Total TPH | PHC635 | <49.90 | 49.90 | mg/kg | 11.25.2020 06:24 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 103 | % | 70-130 | 11.25.2020 06:24 | |
| o-Terphenyl | 84-15-1 | 101 | % | 70-130 | 11.25.2020 06:24 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-9 (3')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-009 Date Collected: 11.18.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 11.20.2020 17:30 % Moisture:

Seq Number: 3142949 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 18:52 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 18:52 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 18:52 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 11.21.2020 18:52 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 18:52 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.001990 | 0.001990 | mg/kg | 11.21.2020 18:52 | U | 1 |
| Total BTEX | | <0.001990 | 0.001990 | mg/kg | 11.21.2020 18:52 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 90 | % | 70-130 | 11.21.2020 18:52 | |
| 4-Bromofluorobenzene | 460-00-4 | 136 | % | 70-130 | 11.21.2020 18:52 | ** |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-10 (3')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-010 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **23.5** | 5.05 | mg/kg | 11.21.2020 17:17 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.8 | 49.8 | mg/kg | 11.25.2020 06:46 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.8 | 49.8 | mg/kg | 11.25.2020 06:46 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.8 | 49.8 | mg/kg | 11.25.2020 06:46 | U | 1 |
| Total TPH | PHC635 | <49.80 | 49.80 | mg/kg | 11.25.2020 06:46 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 102 | % | 70-130 | 11.25.2020 06:46 | |
| o-Terphenyl | 84-15-1 | 102 | % | 70-130 | 11.25.2020 06:46 | |

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# Certificate of Analytical Results 678613

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **Bottomhole-10 (3')** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678613-010 Date Collected: 11.18.2020 00:00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: KTL

Analyst: KTL Date Prep: 11.20.2020 17:30 % Moisture:

Seq Number: 3142949 Basis: Wet Weight

Revised

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 19:13 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 19:13 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 19:13 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00400 | 0.00400 | mg/kg | 11.21.2020 19:13 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 19:13 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002000 | 0.002000 | mg/kg | 11.21.2020 19:13 | U | 1 |
| Total BTEX | | <0.002000 | 0.002000 | mg/kg | 11.21.2020 19:13 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 96 | % | 70-130 | 11.21.2020 19:13 | |
| 4-Bromofluorobenzene | 460-00-4 | 126 | % | 70-130 | 11.21.2020 19:13 | |

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# 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

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# QC Summary 678613

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3143033 — Matrix: Solid — Date Prep: 11.21.2020
MB Sample Id: 7715727-1-BLK — LCS Sample Id: 7715727-1-BKS — LCSD Sample Id: 7715727-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 255 | 102 | 255 | 102 | 90-110 | 0 | 20 | mg/kg | 11.21.2020 15:16 | |

Revised

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3143033 — Matrix: Soil — Date Prep: 11.21.2020
Parent Sample Id: 678613-007 — MS Sample Id: 678613-007 S — MSD Sample Id: 678613-007 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13.8 | 250 | 268 | 102 | 268 | 102 | 90-110 | 0 | 20 | mg/kg | 11.21.2020 16:45 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3143033 — Matrix: Soil — Date Prep: 11.21.2020
Parent Sample Id: 678617-012 — MS Sample Id: 678617-012 S — MSD Sample Id: 678617-012 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 38.8 | 252 | 292 | 100 | 292 | 100 | 90-110 | 0 | 20 | mg/kg | 11.21.2020 15:32 | |

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3143310 — Matrix: Solid — Date Prep: 11.24.2020
MB Sample Id: 7715936-1-BLK — LCS Sample Id: 7715936-1-BKS — LCSD Sample Id: 7715936-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | <50.0 | 1000 | 992 | 99 | 1060 | 106 | 70-130 | 7 | 20 | mg/kg | 11.24.2020 22:15 | |
| Diesel Range Organics (DRO) | <50.0 | 1000 | 1100 | 110 | 1100 | 110 | 70-130 | 0 | 20 | mg/kg | 11.24.2020 22:15 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 100 | | 124 | | 126 | | 70-130 | % | 11.24.2020 22:15 |
| o-Terphenyl | 110 | | 117 | | 126 | | 70-130 | % | 11.24.2020 22:15 |

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3143310 — Matrix: Solid — Date Prep: 11.24.2020
MB Sample Id: 7715936-1-BLK

| Parameter | MB Result | Units | Analysis Date | Flag |
|---|---|---|---|---|
| Motor Oil Range Hydrocarbons (MRO) | <50.0 | mg/kg | 11.24.2020 21:53 | |

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

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# QC Summary 678613

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3143310 Matrix: Soil Date Prep: 11.24.2020
Parent Sample Id: 678612-001 MS Sample Id: 678612-001 S MSD Sample Id: 678612-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | <49.9 | 998 | 1070 | 107 | 1070 | 107 | 70-130 | 0 | 20 | mg/kg | 11.24.2020 23:22 | |
| Diesel Range Organics (DRO) | <49.9 | 998 | 1000 | 100 | 1150 | 115 | 70-130 | 14 | 20 | mg/kg | 11.24.2020 23:22 | |



| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 102 | | 120 | | 70-130 | % | 11.24.2020 23:22 |
| o-Terphenyl | 95 | | 108 | | 70-130 | % | 11.24.2020 23:22 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3142949 Matrix: Solid Date Prep: 11.20.2020
MB Sample Id: 7715715-1-BLK LCS Sample Id: 7715715-1-BKS LCSD Sample Id: 7715715-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | 0.100 | 0.0802 | 80 | 0.0809 | 81 | 70-130 | 1 | 35 | mg/kg | 11.21.2020 09:40 | |
| Toluene | <0.00200 | 0.100 | 0.0851 | 85 | 0.0888 | 89 | 70-130 | 4 | 35 | mg/kg | 11.21.2020 09:40 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.0893 | 89 | 0.0968 | 97 | 70-130 | 8 | 35 | mg/kg | 11.21.2020 09:40 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.182 | 91 | 0.205 | 103 | 70-130 | 12 | 35 | mg/kg | 11.21.2020 09:40 | |
| o-Xylene | <0.00200 | 0.100 | 0.0923 | 92 | 0.104 | 104 | 70-130 | 12 | 35 | mg/kg | 11.21.2020 09:40 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 88 | | 101 | | 96 | | 70-130 | % | 11.21.2020 09:40 |
| 4-Bromofluorobenzene | 118 | | 104 | | 113 | | 70-130 | % | 11.21.2020 09:40 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3142949 Matrix: Soil Date Prep: 11.20.2020
Parent Sample Id: 678612-001 MS Sample Id: 678612-001 S MSD Sample Id: 678612-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | 0.100 | 0.0640 | 64 | 0.0579 | 58 | 70-130 | 10 | 35 | mg/kg | 11.21.2020 10:21 | X |
| Toluene | <0.00200 | 0.100 | 0.0740 | 74 | 0.0675 | 68 | 70-130 | 9 | 35 | mg/kg | 11.21.2020 10:21 | X |
| Ethylbenzene | <0.00200 | 0.100 | 0.0940 | 94 | 0.0980 | 98 | 70-130 | 4 | 35 | mg/kg | 11.21.2020 10:21 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.176 | 88 | 0.159 | 80 | 70-130 | 10 | 35 | mg/kg | 11.21.2020 10:21 | |
| o-Xylene | <0.00200 | 0.100 | 0.0909 | 91 | 0.0833 | 83 | 70-130 | 9 | 35 | mg/kg | 11.21.2020 10:21 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 91 | | 90 | | 70-130 | % | 11.21.2020 10:21 |
| 4-Bromofluorobenzene | 134 | ** | 134 | ** | 70-130 | % | 11.21.2020 10:21 |

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Analysis Request of Chain of Custody Record

6798613 Page ___ of ___

# Tetra Tech, Inc.

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

| | |
|---|---|
| **Client Name:** EOG | **Site Manager:** Mike Carmona |
| **Project Name:** Falcon Riser | |
| **Project Location: (county, state)** Lea County, New Mexico | **Project #:** 212C-MD-02330 |
| **Invoice to:** Galan Kelley | |
| **Receiving Laboratory:** Xenco | **Sampler Signature:** Conner Moehring |
| **Comments:** | |

**ANALYSIS REQUEST**
**(Circle or Specify Method No.)**

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING YEAR: 2020 DATE | SAMPLING TIME | MATRIX WATER | MATRIX SOIL | MATRIX | PRESERVATIVE METHOD HCL | PRESERVATIVE METHOD $HNO_3$ | PRESERVATIVE METHOD ICE | PRESERVATIVE METHOD None | PRESERVATIVE METHOD | # CONTAINERS | FILTERED (Y/N) | BTEX 8021B BTEX 8260B | TPH TX1005 (Ext to C35) | TPH 8015M ( GRO - DRO - ORO - MRO) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8260B / 624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082 / 608 | NORM | PLM (Asbestos) | Chloride | Chloride Sulfate TDS | General Water Chemistry (see attached list) | Anion/Cation Balance | TPH 8015R | | | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bottomhole-1 (4') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Bottomhole-2 (4') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Bottomhole-3 (4') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Bottomhole-4 (4') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Bottomhole-5 (4') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Bottomhole-6 (4') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Bottomhole-7 (4') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Bottomhole-8 (4') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Bottomhole-9 (3') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | Bottomhole-10 (3') | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: Conner Moehring | Date: 11/20/20 | Time: | Received by: J KRAMER |
| Relinquished by: | Date: | Time: | Received by: |
| Relinquished by: | Date: | Time: | Received by: |

Date: 11/20 Time: 1419

**LAB USE ONLY**

Sample Temperature 2.7/2.7

**REMARKS:**

- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: ___

ORIGINAL COPY

# Eurofins Xenco, LLC

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** Tetra Tech- Midland

**Date/ Time Received:** 11.20.2020 02.19.00 PM

**Work Order #:** 678613

**Acceptable Temperature Range: 0 - 6 degC**
**Air and Metal samples Acceptable Range: Ambient**

**Temperature Measuring device used : IR8**

| Sample Receipt Checklist | Comments |
|---|---|
| #1 *Temperature of cooler(s)? | 2.7 |
| #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: 11.20.2020
Brianna Teel

**Checklist reviewed by:** Jessica Kramer Date: 11.20.2020
Jessica Kramer

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# Analytical Report 678612

## for

## Tetra Tech- Midland

**Project Manager: Mike Carmona**

**Falcon Riser**

**212C-MD-02330**

**11.25.2020**

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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# Certificate of Analysis Summary 678612

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

**Date Received in Lab:** Fri 11.20.2020 14:19
**Report Date:** 11.25.2020 15:23
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 678612-001 | | 678612-002 | | 678612-003 | | 678612-004 | | 678612-005 | | 678612-006 | |
| | ***Field Id:*** | SW-1 | | SW-2 | | SW-3 | | SW-4 | | SW-5 | | SW-6 | |
| | ***Depth:*** | | | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | |
| | ***Analyzed:*** | 11.21.2020 12:01 | | 11.21.2020 12:22 | | 11.21.2020 12:42 | | 11.21.2020 13:03 | | 11.21.2020 13:23 | | 11.21.2020 13:44 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00202 | 0.00202 |
| Toluene | | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00202 | 0.00202 |
| Ethylbenzene | | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00202 | 0.00202 |
| m,p-Xylenes | | <0.00402 | 0.00402 | <0.00396 | 0.00396 | <0.00398 | 0.00398 | <0.00398 | 0.00398 | <0.00403 | 0.00403 | <0.00403 | 0.00403 |
| o-Xylene | | <0.00201 | 0.00201 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00202 | 0.00202 | <0.00202 | 0.00202 |
| Total Xylenes | | <0.002010 | 0.002010 | <0.001980 | 0.001980 | <0.001990 | 0.001990 | <0.001990 | 0.001990 | <0.002020 | 0.002020 | <0.002020 | 0.002020 |
| Total BTEX | | <0.002010 | 0.002010 | <0.001980 | 0.001980 | <0.001990 | 0.001990 | <0.001990 | 0.001990 | <0.002020 | 0.002020 | <0.002020 | 0.002020 |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | | 11.21.2020 12:00 | |
| | ***Analyzed:*** | 11.21.2020 17:22 | | 11.21.2020 17:28 | | 11.21.2020 17:33 | | 11.21.2020 17:38 | | 11.21.2020 17:43 | | 11.21.2020 17:49 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 19.1 | 4.99 | 11.9 | 4.98 | 15.2 | 5.04 | 14.5 | 4.96 | 12.4 | 5.03 | 16.7 | 4.99 |
| **TPH By SW8015 Mod** | ***Extracted:*** | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | |
| | ***Analyzed:*** | 11.24.2020 22:59 | | 11.25.2020 00:06 | | 11.25.2020 00:28 | | 11.25.2020 00:51 | | 11.25.2020 01:13 | | 11.25.2020 01:35 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <50.0 | 50.0 | <50.0 | 50.0 | <50.0 | 50.0 | <49.9 | 49.9 | <49.8 | 49.8 | <49.9 | 49.9 |
| Diesel Range Organics (DRO) | | <50.0 | 50.0 | <50.0 | 50.0 | <50.0 | 50.0 | <49.9 | 49.9 | <49.8 | 49.8 | <49.9 | 49.9 |
| Motor Oil Range Hydrocarbons (MRO) | | <50.0 | 50.0 | <50.0 | 50.0 | <50.0 | 50.0 | <49.9 | 49.9 | <49.8 | 49.8 | <49.9 | 49.9 |
| Total TPH | | <50.00 | 50.00 | <50.00 | 50.00 | <50.00 | 50.00 | <49.90 | 49.90 | <49.80 | 49.80 | <49.90 | 49.90 |

BRL - Below Reporting Limit

Jessica Kramer

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

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# Certificate of Analysis Summary 678612

## Tetra Tech- Midland, Midland, TX

### Project Name: Falcon Riser

**Project Id:** 212C-MD-02330
**Contact:** Mike Carmona
**Project Location:** Lea County, New Mexico

**Date Received in Lab:** Fri 11.20.2020 14:19
**Report Date:** 11.25.2020 15:23
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 678612-007 | | 678612-008 | | 678612-009 | | | | | |
| | ***Field Id:*** | SW-7 | | SW-8 | | SW-9 | | | | | |
| | ***Depth:*** | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | | | | |
| | ***Sampled:*** | 11.18.2020 00:00 | | 11.18.2020 00:00 | | 11.18.2020 00:00 | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | 11.20.2020 17:30 | | 11.20.2020 17:30 | | 11.20.2020 17:30 | | | | | |
| | ***Analyzed:*** | 11.21.2020 14:05 | | 11.21.2020 14:25 | | 11.21.2020 14:46 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Benzene | | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | | | | |
| Toluene | | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | | | | |
| Ethylbenzene | | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | | | | |
| m,p-Xylenes | | <0.00396 | 0.00396 | <0.00399 | 0.00399 | <0.00400 | 0.00400 | | | | |
| o-Xylene | | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | | | | |
| Total Xylenes | | <0.001980 | 0.001980 | <0.002000 | 0.002000 | <0.002000 | 0.002000 | | | | |
| Total BTEX | | <0.001980 | 0.001980 | <0.002000 | 0.002000 | <0.002000 | 0.002000 | | | | |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | 11.21.2020 12:15 | | 11.21.2020 12:15 | | 11.21.2020 12:15 | | | | | |
| | ***Analyzed:*** | 11.21.2020 12:38 | | 11.21.2020 13:00 | | 11.21.2020 13:07 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Chloride | | 8.32 | 5.04 | 12.8 | 4.96 | 44.2 | 4.98 | | | | |
| **TPH By SW8015 Mod** | ***Extracted:*** | 11.24.2020 15:00 | | 11.24.2020 15:00 | | 11.24.2020 15:00 | | | | | |
| | ***Analyzed:*** | 11.25.2020 01:58 | | 11.25.2020 02:20 | | 11.25.2020 02:42 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Gasoline Range Hydrocarbons (GRO) | | <50.0 | 50.0 | <49.9 | 49.9 | <50.0 | 50.0 | | | | |
| Diesel Range Organics (DRO) | | <50.0 | 50.0 | <49.9 | 49.9 | <50.0 | 50.0 | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | <50.0 | 50.0 | <49.9 | 49.9 | <50.0 | 50.0 | | | | |
| Total TPH | | <50.00 | 50.00 | <49.90 | 49.90 | <50.00 | 50.00 | | | | |

BRL - Below Reporting Limit

Jessica Kramer

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

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11.25.2020

Project Manager: **Mike Carmona**
**Tetra Tech- Midland**
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **678612**
**Falcon Riser**
Project Address: Lea County, New Mexico

**Mike Carmona**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 678612. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 678612 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

**Jessica Kramer**
Project Manager

*A Small Business and Minority Company*

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

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# Sample Cross Reference 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| SW-1 | S | 11.18.2020 00:00 | | 678612-001 |
| SW-2 | S | 11.18.2020 00:00 | | 678612-002 |
| SW-3 | S | 11.18.2020 00:00 | | 678612-003 |
| SW-4 | S | 11.18.2020 00:00 | | 678612-004 |
| SW-5 | S | 11.18.2020 00:00 | | 678612-005 |
| SW-6 | S | 11.18.2020 00:00 | | 678612-006 |
| SW-7 | S | 11.18.2020 00:00 | | 678612-007 |
| SW-8 | S | 11.18.2020 00:00 | | 678612-008 |
| SW-9 | S | 11.18.2020 00:00 | | 678612-009 |

# CASE NARRATIVE



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***Client Name: Tetra Tech- Midland***

***Project Name: Falcon Riser***

Project ID: *212C-MD-02330*
Work Order Number(s): *678612*

Report Date: *11.25.2020*
Date Received: *11.20.2020*

**Sample receipt non conformances and comments:**

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3142949 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected. Samples affected are: 678612-001 S,678612-001 SD,678612-008,678612-005,678612-006,678612-007,678612-003,678612-002,678612-004.

Lab Sample ID 678612-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 678612-001, -002, -003, -004, -005, -006, -007, -008, -009.
The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits, therefore the data was accepted.

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-1** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-001 | Date Collected: | 11.18.2020 00:00 | | |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 11.21.2020 12:00 | % Moisture: | |
| Seq Number: | 3143033 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **19.1** | 4.99 | mg/kg | 11.21.2020 17:22 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH By SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DVM | | | | |
| Analyst: | ARM | Date Prep: | 11.24.2020 15:00 | % Moisture: | |
| Seq Number: | 3143310 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 11.24.2020 22:59 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 11.24.2020 22:59 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 11.24.2020 22:59 | U | 1 |
| Total TPH | PHC635 | <50.00 | 50.00 | mg/kg | 11.24.2020 22:59 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 101 | % | 70-130 | 11.24.2020 22:59 | |
| o-Terphenyl | 84-15-1 | 103 | % | 70-130 | 11.24.2020 22:59 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-1** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-001 | Date Collected: | 11.18.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 11.20.2020 17:30 | % Moisture: | |
| Seq Number: | 3142949 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00201 | 0.00201 | mg/kg | 11.21.2020 12:01 | UX | 1 |
| Toluene | 108-88-3 | <0.00201 | 0.00201 | mg/kg | 11.21.2020 12:01 | UX | 1 |
| Ethylbenzene | 100-41-4 | <0.00201 | 0.00201 | mg/kg | 11.21.2020 12:01 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00402 | 0.00402 | mg/kg | 11.21.2020 12:01 | U | 1 |
| o-Xylene | 95-47-6 | <0.00201 | 0.00201 | mg/kg | 11.21.2020 12:01 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002010 | 0.002010 | mg/kg | 11.21.2020 12:01 | U | 1 |
| Total BTEX | | <0.002010 | 0.002010 | mg/kg | 11.21.2020 12:01 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 88 | % | 70-130 | 11.21.2020 12:01 | |
| 4-Bromofluorobenzene | 460-00-4 | 119 | % | 70-130 | 11.21.2020 12:01 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-2** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-002 | Date Collected: | 11.18.2020 00:00 | | |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 11.21.2020 12:00 | % Moisture: | |
| Seq Number: | 3143033 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **11.9** | 4.98 | mg/kg | 11.21.2020 17:28 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH By SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DVM | | | | |
| Analyst: | ARM | Date Prep: | 11.24.2020 15:00 | % Moisture: | |
| Seq Number: | 3143310 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 11.25.2020 00:06 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 11.25.2020 00:06 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 11.25.2020 00:06 | U | 1 |
| Total TPH | PHC635 | <50.00 | 50.00 | mg/kg | 11.25.2020 00:06 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 100 | % | 70-130 | 11.25.2020 00:06 | |
| o-Terphenyl | 84-15-1 | 100 | % | 70-130 | 11.25.2020 00:06 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-2** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-002 | Date Collected: | 11.18.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 11.20.2020 17:30 | % Moisture: | |
| Seq Number: | 3142949 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00198 | 0.00198 | mg/kg | 11.21.2020 12:22 | U | 1 |
| Toluene | 108-88-3 | <0.00198 | 0.00198 | mg/kg | 11.21.2020 12:22 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00198 | 0.00198 | mg/kg | 11.21.2020 12:22 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00396 | 0.00396 | mg/kg | 11.21.2020 12:22 | U | 1 |
| o-Xylene | 95-47-6 | <0.00198 | 0.00198 | mg/kg | 11.21.2020 12:22 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.001980 | 0.001980 | mg/kg | 11.21.2020 12:22 | U | 1 |
| Total BTEX | | <0.001980 | 0.001980 | mg/kg | 11.21.2020 12:22 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 139 | % | 70-130 | 11.21.2020 12:22 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 95 | % | 70-130 | 11.21.2020 12:22 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **SW-3** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678612-003 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **15.2** | 5.04 | mg/kg | 11.21.2020 17:33 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 11.25.2020 00:28 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 11.25.2020 00:28 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 11.25.2020 00:28 | U | 1 |
| Total TPH | PHC635 | <50.00 | 50.00 | mg/kg | 11.25.2020 00:28 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 111 | % | 70-130 | 11.25.2020 00:28 | |
| o-Terphenyl | 84-15-1 | 112 | % | 70-130 | 11.25.2020 00:28 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-3** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-003 | Date Collected: | 11.18.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 11.20.2020 17:30 | % Moisture: | |
| Seq Number: | 3142949 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 12:42 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 12:42 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 12:42 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 11.21.2020 12:42 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 12:42 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.001990 | 0.001990 | mg/kg | 11.21.2020 12:42 | U | 1 |
| Total BTEX | | <0.001990 | 0.001990 | mg/kg | 11.21.2020 12:42 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 84 | % | 70-130 | 11.21.2020 12:42 | |
| 4-Bromofluorobenzene | 460-00-4 | 134 | % | 70-130 | 11.21.2020 12:42 | ** |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **SW-4** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678612-004 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:00 % Moisture:

Seq Number: 3143033 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **14.5** | 4.96 | mg/kg | 11.21.2020 17:38 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.9 | 49.9 | mg/kg | 11.25.2020 00:51 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.9 | 49.9 | mg/kg | 11.25.2020 00:51 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.9 | 49.9 | mg/kg | 11.25.2020 00:51 | U | 1 |
| Total TPH | PHC635 | <49.90 | 49.90 | mg/kg | 11.25.2020 00:51 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 106 | % | 70-130 | 11.25.2020 00:51 | |
| o-Terphenyl | 84-15-1 | 108 | % | 70-130 | 11.25.2020 00:51 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-4** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-004 | Date Collected: | 11.18.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 11.20.2020 17:30 | % Moisture: | |
| Seq Number: | 3142949 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 13:03 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 13:03 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 13:03 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 11.21.2020 13:03 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 11.21.2020 13:03 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.001990 | 0.001990 | mg/kg | 11.21.2020 13:03 | U | 1 |
| Total BTEX | | <0.001990 | 0.001990 | mg/kg | 11.21.2020 13:03 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 143 | % | 70-130 | 11.21.2020 13:03 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 92 | % | 70-130 | 11.21.2020 13:03 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-5** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-005 | Date Collected: | 11.18.2020 00:00 | | |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 11.21.2020 12:00 | % Moisture: | |
| Seq Number: | 3143033 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **12.4** | 5.03 | mg/kg | 11.21.2020 17:43 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH By SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DVM | | | | |
| Analyst: | ARM | Date Prep: | 11.24.2020 15:00 | % Moisture: | |
| Seq Number: | 3143310 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.8 | 49.8 | mg/kg | 11.25.2020 01:13 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.8 | 49.8 | mg/kg | 11.25.2020 01:13 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.8 | 49.8 | mg/kg | 11.25.2020 01:13 | U | 1 |
| Total TPH | PHC635 | <49.80 | 49.80 | mg/kg | 11.25.2020 01:13 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 92 | % | 70-130 | 11.25.2020 01:13 | |
| o-Terphenyl | 84-15-1 | 92 | % | 70-130 | 11.25.2020 01:13 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-5** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-005 | Date Collected: | 11.18.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 11.20.2020 17:30 | % Moisture: | |
| Seq Number: | 3142949 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 13:23 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 13:23 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 13:23 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00403 | 0.00403 | mg/kg | 11.21.2020 13:23 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 13:23 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002020 | 0.002020 | mg/kg | 11.21.2020 13:23 | U | 1 |
| Total BTEX | | <0.002020 | 0.002020 | mg/kg | 11.21.2020 13:23 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 133 | % | 70-130 | 11.21.2020 13:23 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 94 | % | 70-130 | 11.21.2020 13:23 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-6** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-006 | Date Collected: | 11.18.2020 00:00 | | |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 11.21.2020 12:00 | % Moisture: | |
| Seq Number: | 3143033 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **16.7** | 4.99 | mg/kg | 11.21.2020 17:49 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH By SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DVM | | | | |
| Analyst: | ARM | Date Prep: | 11.24.2020 15:00 | % Moisture: | |
| Seq Number: | 3143310 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.9 | 49.9 | mg/kg | 11.25.2020 01:35 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.9 | 49.9 | mg/kg | 11.25.2020 01:35 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.9 | 49.9 | mg/kg | 11.25.2020 01:35 | U | 1 |
| Total TPH | PHC635 | <49.90 | 49.90 | mg/kg | 11.25.2020 01:35 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-130 | 11.25.2020 01:35 | |
| o-Terphenyl | 84-15-1 | 110 | % | 70-130 | 11.25.2020 01:35 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-6** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-006 | Date Collected: | 11.18.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 11.20.2020 17:30 | % Moisture: | |
| Seq Number: | 3142949 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 13:44 | U | 1 |
| Toluene | 108-88-3 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 13:44 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 13:44 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00403 | 0.00403 | mg/kg | 11.21.2020 13:44 | U | 1 |
| o-Xylene | 95-47-6 | <0.00202 | 0.00202 | mg/kg | 11.21.2020 13:44 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002020 | 0.002020 | mg/kg | 11.21.2020 13:44 | U | 1 |
| Total BTEX | | <0.002020 | 0.002020 | mg/kg | 11.21.2020 13:44 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 139 | % | 70-130 | 11.21.2020 13:44 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 86 | % | 70-130 | 11.21.2020 13:44 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **SW-7** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678612-007 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:15 % Moisture:

Seq Number: 3143036 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **8.32** | 5.04 | mg/kg | 11.21.2020 12:38 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 11.25.2020 01:58 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 11.25.2020 01:58 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 11.25.2020 01:58 | U | 1 |
| Total TPH | PHC635 | <50.00 | 50.00 | mg/kg | 11.25.2020 01:58 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 99 | % | 70-130 | 11.25.2020 01:58 | |
| o-Terphenyl | 84-15-1 | 98 | % | 70-130 | 11.25.2020 01:58 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-7** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-007 | Date Collected: | 11.18.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 11.20.2020 17:30 | % Moisture: | |
| Seq Number: | 3142949 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00198 | 0.00198 | mg/kg | 11.21.2020 14:05 | U | 1 |
| Toluene | 108-88-3 | <0.00198 | 0.00198 | mg/kg | 11.21.2020 14:05 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00198 | 0.00198 | mg/kg | 11.21.2020 14:05 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00396 | 0.00396 | mg/kg | 11.21.2020 14:05 | U | 1 |
| o-Xylene | 95-47-6 | <0.00198 | 0.00198 | mg/kg | 11.21.2020 14:05 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.001980 | 0.001980 | mg/kg | 11.21.2020 14:05 | U | 1 |
| Total BTEX | | <0.001980 | 0.001980 | mg/kg | 11.21.2020 14:05 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 87 | % | 70-130 | 11.21.2020 14:05 | |
| 4-Bromofluorobenzene | 460-00-4 | 141 | % | 70-130 | 11.21.2020 14:05 | ** |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

Sample Id: **SW-8** Matrix: Soil Date Received:11.20.2020 14:19

Lab Sample Id: 678612-008 Date Collected: 11.18.2020 00:00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.21.2020 12:15 % Moisture:

Seq Number: 3143036 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **12.8** | 4.96 | mg/kg | 11.21.2020 13:00 | | 1 |

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.24.2020 15:00 % Moisture:

Seq Number: 3143310 Basis: Wet Weight

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <49.9 | 49.9 | mg/kg | 11.25.2020 02:20 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <49.9 | 49.9 | mg/kg | 11.25.2020 02:20 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <49.9 | 49.9 | mg/kg | 11.25.2020 02:20 | U | 1 |
| Total TPH | PHC635 | <49.90 | 49.90 | mg/kg | 11.25.2020 02:20 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 102 | % | 70-130 | 11.25.2020 02:20 | |
| o-Terphenyl | 84-15-1 | 103 | % | 70-130 | 11.25.2020 02:20 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-8** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-008 | Date Collected: | 11.18.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 11.20.2020 17:30 | % Moisture: | |
| Seq Number: | 3142949 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 14:25 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 14:25 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 14:25 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 11.21.2020 14:25 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 14:25 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002000 | 0.002000 | mg/kg | 11.21.2020 14:25 | U | 1 |
| Total BTEX | | <0.002000 | 0.002000 | mg/kg | 11.21.2020 14:25 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 135 | % | 70-130 | 11.21.2020 14:25 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 94 | % | 70-130 | 11.21.2020 14:25 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-9** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-009 | Date Collected: | 11.18.2020 00:00 | | |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Inorganic Anions by EPA 300/300.1 | | | Prep Method: | E300P |
| Tech: | CHE | | | | |
| Analyst: | CHE | Date Prep: | 11.21.2020 12:15 | % Moisture: | |
| Seq Number: | 3143036 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **44.2** | 4.98 | mg/kg | 11.21.2020 13:07 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH By SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DVM | | | | |
| Analyst: | ARM | Date Prep: | 11.24.2020 15:00 | % Moisture: | |
| Seq Number: | 3143310 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <50.0 | 50.0 | mg/kg | 11.25.2020 02:42 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <50.0 | 50.0 | mg/kg | 11.25.2020 02:42 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <50.0 | 50.0 | mg/kg | 11.25.2020 02:42 | U | 1 |
| Total TPH | PHC635 | <50.00 | 50.00 | mg/kg | 11.25.2020 02:42 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 109 | % | 70-130 | 11.25.2020 02:42 | |
| o-Terphenyl | 84-15-1 | 111 | % | 70-130 | 11.25.2020 02:42 | |

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# Certificate of Analytical Results 678612

## Tetra Tech- Midland, Midland, TX

Falcon Riser

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW-9** | Matrix: | Soil | Date Received: | 11.20.2020 14:19 |
| Lab Sample Id: | 678612-009 | Date Collected: | 11.18.2020 00:00 | | |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5035A |
| Tech: | KTL | | | | |
| Analyst: | KTL | Date Prep: | 11.20.2020 17:30 | % Moisture: | |
| Seq Number: | 3142949 | | | Basis: | Wet Weight |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 14:46 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 14:46 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 14:46 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00400 | 0.00400 | mg/kg | 11.21.2020 14:46 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 11.21.2020 14:46 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.002000 | 0.002000 | mg/kg | 11.21.2020 14:46 | U | 1 |
| Total BTEX | | <0.002000 | 0.002000 | mg/kg | 11.21.2020 14:46 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 130 | % | 70-130 | 11.21.2020 14:46 | |
| 1,4-Difluorobenzene | 540-36-3 | 90 | % | 70-130 | 11.21.2020 14:46 | |

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# 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

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# QC Summary 678612

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3143033 — Matrix: Solid — Date Prep: 11.21.2020
MB Sample Id: 7715727-1-BLK — LCS Sample Id: 7715727-1-BKS — LCSD Sample Id: 7715727-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 255 | 102 | 255 | 102 | 90-110 | 0 | 20 | mg/kg | 11.21.2020 15:16 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3143036 — Matrix: Solid — Date Prep: 11.21.2020
MB Sample Id: 7715728-1-BLK — LCS Sample Id: 7715728-1-BKS — LCSD Sample Id: 7715728-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <5.00 | 250 | 252 | 101 | 252 | 101 | 90-110 | 0 | 20 | mg/kg | 11.21.2020 12:23 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3143033 — Matrix: Soil — Date Prep: 11.21.2020
Parent Sample Id: 678613-007 — MS Sample Id: 678613-007 S — MSD Sample Id: 678613-007 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 13.8 | 250 | 268 | 102 | 268 | 102 | 90-110 | 0 | 20 | mg/kg | 11.21.2020 16:45 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3143033 — Matrix: Soil — Date Prep: 11.21.2020
Parent Sample Id: 678617-012 — MS Sample Id: 678617-012 S — MSD Sample Id: 678617-012 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 38.8 | 252 | 292 | 100 | 292 | 100 | 90-110 | 0 | 20 | mg/kg | 11.21.2020 15:32 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3143036 — Matrix: Soil — Date Prep: 11.21.2020
Parent Sample Id: 678612-007 — MS Sample Id: 678612-007 S — MSD Sample Id: 678612-007 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 8.32 | 252 | 267 | 103 | 263 | 101 | 90-110 | 2 | 20 | mg/kg | 11.21.2020 12:45 | |

**Analytical Method:** Inorganic Anions by EPA 300/300.1 — Prep Method: E300P
Seq Number: 3143036 — Matrix: Soil — Date Prep: 11.21.2020
Parent Sample Id: 678615-008 — MS Sample Id: 678615-008 S — MSD Sample Id: 678615-008 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1280 | 1250 | 2590 | 105 | 2570 | 103 | 90-110 | 1 | 20 | mg/kg | 11.21.2020 14:28 | |

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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# QC Summary 678612

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3143310 — Matrix: Solid — Date Prep: 11.24.2020
MB Sample Id: 7715936-1-BLK — LCS Sample Id: 7715936-1-BKS — LCSD Sample Id: 7715936-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | <50.0 | 1000 | 992 | 99 | 1060 | 106 | 70-130 | 7 | 20 | mg/kg | 11.24.2020 22:15 | |
| Diesel Range Organics (DRO) | <50.0 | 1000 | 1100 | 110 | 1100 | 110 | 70-130 | 0 | 20 | mg/kg | 11.24.2020 22:15 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 100 | | 124 | | 126 | | 70-130 | % | 11.24.2020 22:15 |
| o-Terphenyl | 110 | | 117 | | 126 | | 70-130 | % | 11.24.2020 22:15 |

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3143310 — Matrix: Solid — Date Prep: 11.24.2020
MB Sample Id: 7715936-1-BLK

| Parameter | MB Result | Units | Analysis Date | Flag |
|---|---|---|---|---|
| Motor Oil Range Hydrocarbons (MRO) | <50.0 | mg/kg | 11.24.2020 21:53 | |

**Analytical Method:** TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3143310 — Matrix: Soil — Date Prep: 11.24.2020
Parent Sample Id: 678612-001 — MS Sample Id: 678612-001 S — MSD Sample Id: 678612-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | <49.9 | 998 | 1070 | 107 | 1070 | 107 | 70-130 | 0 | 20 | mg/kg | 11.24.2020 23:22 | |
| Diesel Range Organics (DRO) | <49.9 | 998 | 1000 | 100 | 1150 | 115 | 70-130 | 14 | 20 | mg/kg | 11.24.2020 23:22 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 102 | | 120 | | 70-130 | % | 11.24.2020 23:22 |
| o-Terphenyl | 95 | | 108 | | 70-130 | % | 11.24.2020 23:22 |

**Analytical Method:** BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3142949 — Matrix: Solid — Date Prep: 11.20.2020
MB Sample Id: 7715715-1-BLK — LCS Sample Id: 7715715-1-BKS — LCSD Sample Id: 7715715-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | 0.100 | 0.0802 | 80 | 0.0809 | 81 | 70-130 | 1 | 35 | mg/kg | 11.21.2020 09:40 | |
| Toluene | <0.00200 | 0.100 | 0.0851 | 85 | 0.0888 | 89 | 70-130 | 4 | 35 | mg/kg | 11.21.2020 09:40 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.0893 | 89 | 0.0968 | 97 | 70-130 | 8 | 35 | mg/kg | 11.21.2020 09:40 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.182 | 91 | 0.205 | 103 | 70-130 | 12 | 35 | mg/kg | 11.21.2020 09:40 | |
| o-Xylene | <0.00200 | 0.100 | 0.0923 | 92 | 0.104 | 104 | 70-130 | 12 | 35 | mg/kg | 11.21.2020 09:40 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 88 | | 101 | | 96 | | 70-130 | % | 11.21.2020 09:40 |
| 4-Bromofluorobenzene | 118 | | 104 | | 113 | | 70-130 | % | 11.21.2020 09:40 |

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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# QC Summary 678612

## Tetra Tech- Midland

Falcon Riser

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3142949 Matrix: Soil Date Prep: 11.20.2020

Parent Sample Id: 678612-001 MS Sample Id: 678612-001 S MSD Sample Id: 678612-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00200 | 0.100 | 0.0640 | 64 | 0.0579 | 58 | 70-130 | 10 | 35 | mg/kg | 11.21.2020 10:21 | X |
| Toluene | <0.00200 | 0.100 | 0.0740 | 74 | 0.0675 | 68 | 70-130 | 9 | 35 | mg/kg | 11.21.2020 10:21 | X |
| Ethylbenzene | <0.00200 | 0.100 | 0.0940 | 94 | 0.0980 | 98 | 70-130 | 4 | 35 | mg/kg | 11.21.2020 10:21 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.176 | 88 | 0.159 | 80 | 70-130 | 10 | 35 | mg/kg | 11.21.2020 10:21 | |
| o-Xylene | <0.00200 | 0.100 | 0.0909 | 91 | 0.0833 | 83 | 70-130 | 9 | 35 | mg/kg | 11.21.2020 10:21 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 91 | | 90 | | 70-130 | % | 11.21.2020 10:21 |
| 4-Bromofluorobenzene | 134 | ** | 134 | ** | 70-130 | % | 11.21.2020 10:21 |

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

**Analysis Request of Chain of Custody Record**

6798612 Page 1 of 1

# Tetra Tech, Inc.

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

| | |
|---|---|
| **Client Name:** EOG | **Site Manager:** Mike Carmona |
| **Project Name:** Falcon Riser | |
| **Project Location: (county, state)** Lea County, New Mexico | **Project #:** 212C-MD-02330 |
| **Invoice to:** Galan Kelley | |
| **Receiving Laboratory:** Xenco | **Sampler Signature:** Conner Moehring |
| **Comments:** | |

**ANALYSIS REQUEST**
**(Circle or Specify Method No.)**

| LAB # (LAB USE ONLY) | SAMPLE IDENTIFICATION | SAMPLING YEAR: 2020 DATE | SAMPLING TIME | MATRIX WATER | MATRIX SOIL | MATRIX | PRESERVATIVE METHOD HCL | PRESERVATIVE METHOD $HNO_3$ | PRESERVATIVE METHOD ICE | PRESERVATIVE METHOD None | PRESERVATIVE METHOD | # CONTAINERS | FILTERED (Y/N) | BTEX 8021B BTEX 8260B | TPH TX1005 (Ext to C35) | TPH 8015M ( GRO - DRO - ORO - MRO) | PAH 8270C | Total Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Metals Ag As Ba Cd Cr Pb Se Hg | TCLP Volatiles | TCLP Semi Volatiles | RCI | GC/MS Vol. 8260B / 624 | GC/MS Semi. Vol. 8270C/625 | PCB's 8082 / 608 | NORM | PLM (Asbestos) | Chloride | Chloride Sulfate TDS | General Water Chemistry (see attached list) | Anion/Cation Balance | TPH 8015R | | | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SW-1 | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | SW-2 | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | SW-3 | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | SW-4 | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | SW-5 | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | SW-6 | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | SW-7 | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | SW-8 | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | SW-9 | 11/18/2020 | | | X | | | | X | | | 1 | N | X | | X | | | | | | | | | | | | X | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished by: Conner Moehring | Date: 11/20/20 | Time: | Received by: |
| Relinquished by: | Date: | Time: | Received by: |
| Relinquished by: | Date: | Time: | Received by: |

Received by: JCRAMER 11/20 1419 Date: Time:

**LAB USE ONLY**
Sample Temperature 2.2/2.7

**REMARKS:**
- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

# Eurofins Xenco, LLC

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** Tetra Tech- Midland

**Date/ Time Received:** 11.20.2020 02.19.00 PM

**Work Order #:** 678612

**Acceptable Temperature Range: 0 - 6 degC**
**Air and Metal samples Acceptable Range: Ambient**

**Temperature Measuring device used : IR8**

| Sample Receipt Checklist | Comments |
|---|---|
| #1 *Temperature of cooler(s)? | 2.7 |
| #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: 11.20.2020
Brianna Teel

**Checklist reviewed by:** Jessica Kramer Date: 11.20.2020
Jessica Kramer

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

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

CONDITIONS

Action 13384

## CONDITIONS OF APPROVAL

| Operator: | | | OGRID: | Action Number: | Action Type: |
|---|---|---|---|---|---|
| EOG RESOURCES INC | P.O. Box 2267 | Midland, TX79702 | 7377 | 13384 | C-141 |

| OCD Reviewer | Condition |
|---|---|
| ceads | No further action is required |