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	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

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)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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		

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ 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: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 9/13/2021

NAPP2116770257

10# Brine Water - Released Volume Calculation

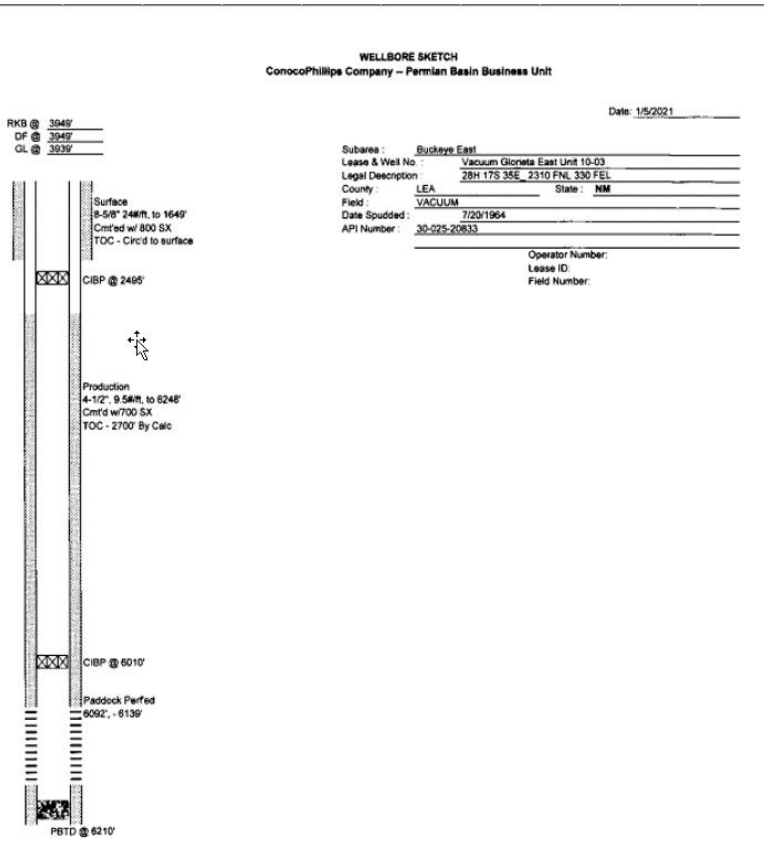
34.9bbl loss calculation is based off of volume of 2 3/8”tubing @ .00387bbls/ft plus volume of 4 1/2” casing at .0101bbls/ft = .01397bbls/ft X 2499’ = 34.9bbls capacity.

00387 + .0101= .01397

.01397 * 2499 = 34.9bbls

2499 is the depth

Well Name	VGEU 10-03
Surface Casing	8-5/8", 24 #
Production Casing	4-1/2", 9.5#
Surface - Production Annulus Capacity, cu ft/ft	0.1926
Production Capacity, cu ft/ft	0.0912
Surface Casing Shoe, ft	1649
Production Casing Shoe, ft	6248
RBP Set Depth 1, ft	2495
RBP Set Depth 2, ft	6010
Perforated Interval	6092 - 6250
****Gas volume was not coming from perforated interval, coming from between 2,495' - 6,010'	
Surface Pressure, psig	0
Total Gas Volume, scf	321



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.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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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: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 9/13/2021

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: Ramona Marcus Date: 9/13/2021

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

Signature: _____ Date: _____

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: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 9/13/2021

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: _____

NAPP2116770257

September 13, 2021

District Supervisor
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

Re: Release Characterization and Closure Request
ConocoPhillips
VGEU 10-03 Tubing Release
Unit Letter H, Section 28, Township 17 South, Range 35 East
Lea County, New Mexico
Incident ID: nAPP2116770257

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from the tubing at the Vacuum Glorieta East Unit (VGEU) 10-03 well (API # 30-025-20833). The release footprint is located in Public Land Survey System (PLSS) Unit Letter H, Section 28, Township 17 South, Range 35 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.806762°, -103.455150°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the release was discovered on June 15, 2021. As documented on the C-141 form, an unplanned release from the well tubing resulted in the loss of 35 bbls of 10# brine water due to a well control incident. 34 bbls was released and recovered. 1 bbl brine water misted on pad. The mist was contained to the pad location. 0.34 MCF natural gas vented during the incident.

The approximate release footprint is shown in Figure 3. The C-141 report form for the release was submitted to the New Mexico Oil Conservation District (NMOCD) on June 17, 2021. The NMOCD assigned this release Incident ID nAPP2116770257.

SITE CHARACTERIZATION

A site characterization was performed and no watercourses, sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, playa lakes, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.0029 New Mexico Administrative Code (NMAC). A playa lake was observed to the west, however the feature is located approximately 220’ west of the release footprint. The Site is in an area of low karst potential.

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there is one water well within a ½ mile (800-meter) radius of the Site. This well has reported depth to groundwater at 65 feet below ground surface (bgs). The site characterization data is included in Appendix B.

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

REGULATORY FRAMEWORK

Based upon the release footprint and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

Based on the site characterization and in accordance with Table I of 19.15.29.12 NMAC and the release location (on-pad), the remediation RRALs for the Site are as follows:

Constituent	RRAL
Chloride	10,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

INITIAL RESPONSE AND REMEDIAL ACTIVITIES

The approximate release extent is shown in Figure 3. In accordance with 19.15.29.8.B.(4) NMAC that states “the responsible party may commence remediation immediately after discovery of a release”, COP elected to begin remediation of the impacted area in August 2021.

Due to the well control incident which caused the release, the pumping unit was removed from location. The release footprint in the immediate vicinity of the well tubing (as shown in Figure 3) was then excavated to approximately 18 feet bgs to access the well tubing, as well as remove the impacted soils in the vicinity. For safety of the onsite workers, the excavation was benched down to the floor at 18’ bgs. Approximately 150 cubic yards of impacted material were transported to the R360 facility in Hobbs, New Mexico.

At the request of ConocoPhillips, Tetra Tech personnel conducted soil sampling following initial response and remedial activities. A total of five (5) locations were sampled on August 24, 2021. Four (4) sample locations (CS-1 through CS-4) were used along the perimeter of the excavated area to gauge the effectiveness of the remedial activities. One sample (FS-1) was collected from the floor of the excavation. Soil samples collected were field screened for salinity parts per million (ppm) using an ExStik II EC 400 meter.

A total of five (5) samples were collected from the five (5) locations and submitted to Eurofins Xenco Laboratory in Midland, TX to be analyzed for chlorides via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix C. Photographic documentation of the excavated area is included in Appendix D.

SUMMARY OF SAMPLING RESULTS

Results from the August 2021 soil sampling event are summarized in Table 1. The analytical results associated with the perimeter locations were below the Site reclamation and reclamation RRAL for chloride (600 mg/kg). The analytical results associated with perimeter locations CS-1, CS-2, and CS-4 were below the Site remediation RRALs for TPH. There were no analytical results which exceeded the Site RRALs for BTEX in the perimeter locations. The analytical results associated with the floor sample collected were below the Site remediation RRALs for chloride, TPH and BTEX. After review of the analytical results from the sampling event, both horizontal and vertical delineation was achieved during the August 2021 sampling activities.

Based on the groundwater determination as described in the Site Characterization (greater than 50 feet below ground surface), and as this fluid release contains on-pad surface soil chloride concentrations of less than 10,000 mg/kg, the analytical results collected from the floor sample stand as a vertical definition. The

analytical results within the perimeter sample locations determine the lateral extent of this release and are 600 mg/kg chloride or less. Based on the site assessment results, the impacted surface area of the release on the production lease pad meets the remediation standards of Table I of 19.15.29.12 NMAC. Final reclamation of any impact within the lease pad area shall take place in accordance with 19.15.29.13 (D) NMAC once the Site is no longer being used for oil and gas operations. Therefore, reclamation of the soils located within the confines of the VGEU 10-03 well pad will be delayed until the abandonment of the VGEU 10-03 well. The well is scheduled to be plugged in the next 3-6 months.

For the health and safety of onsite workers, after confirmation sampling, the open excavation was backfilled with clean material to surface grade. The total remediated area encompassed a surface area of approximately 650 square feet. Each confirmation sample laboratory analytical result was directly compared to the proposed RRALs to demonstrate compliance. All final confirmation soil samples (floor and sidewall) were below the respective remediation RRALs for BTEX, TPH and chlorides.

The analytical results demonstrated that the initial response in the vicinity of the tubing was effective and sufficient for remediation. Results below the applicable remediation RRALs were received. Although analytical results associated with the CS-1, CS-2, and CS-4 sample locations slightly exceeded the reclamation RRAL for TPH used to complete restoration, the impacted surface area occurring on the developed pad at the site was remediated to meet the standards of Table I of 19.15.29.12 NMAC.

CONCLUSION

ConocoPhillips has completed remediation at the release site. In accordance with 19.15.29.12(D)(1)(b) NMAC, ConocoPhillips conducted confirmation sampling of the remediated area for verification of remedial activities where each sidewall and floor sample was representative of approximately 200 square feet. There are no Table I exceedances at the on-pad release site. This final closure report has been submitted within 90 days of discovery of the release. This final closure request details the release characterization and remediation activities and the results of the confirmation sampling. As noted, on-site reclamation and restoration will occur once the well is plugged and operations have ceased at this active well pad.

If you have any questions concerning the remediation work, or confirmation sampling for the Site, please do not hesitate to contact me by email at christian.llull@tetratech.com or call me at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.

Christian M. Llull, P.G.
Project Manager

cc:
Ms. Kelsy Waggaman, GPBU – ConocoPhillips
Mr. Luke Alejandro, GPBU – ConocoPhillips

LIST OF ATTACHMENTS

Figures:

Figure 1 – Overview Map
Figure 2 – Site Location/Topographic Map
Figure 3 – Approximate Release Extent
Figure 4 – Remediation Extent

Tables:

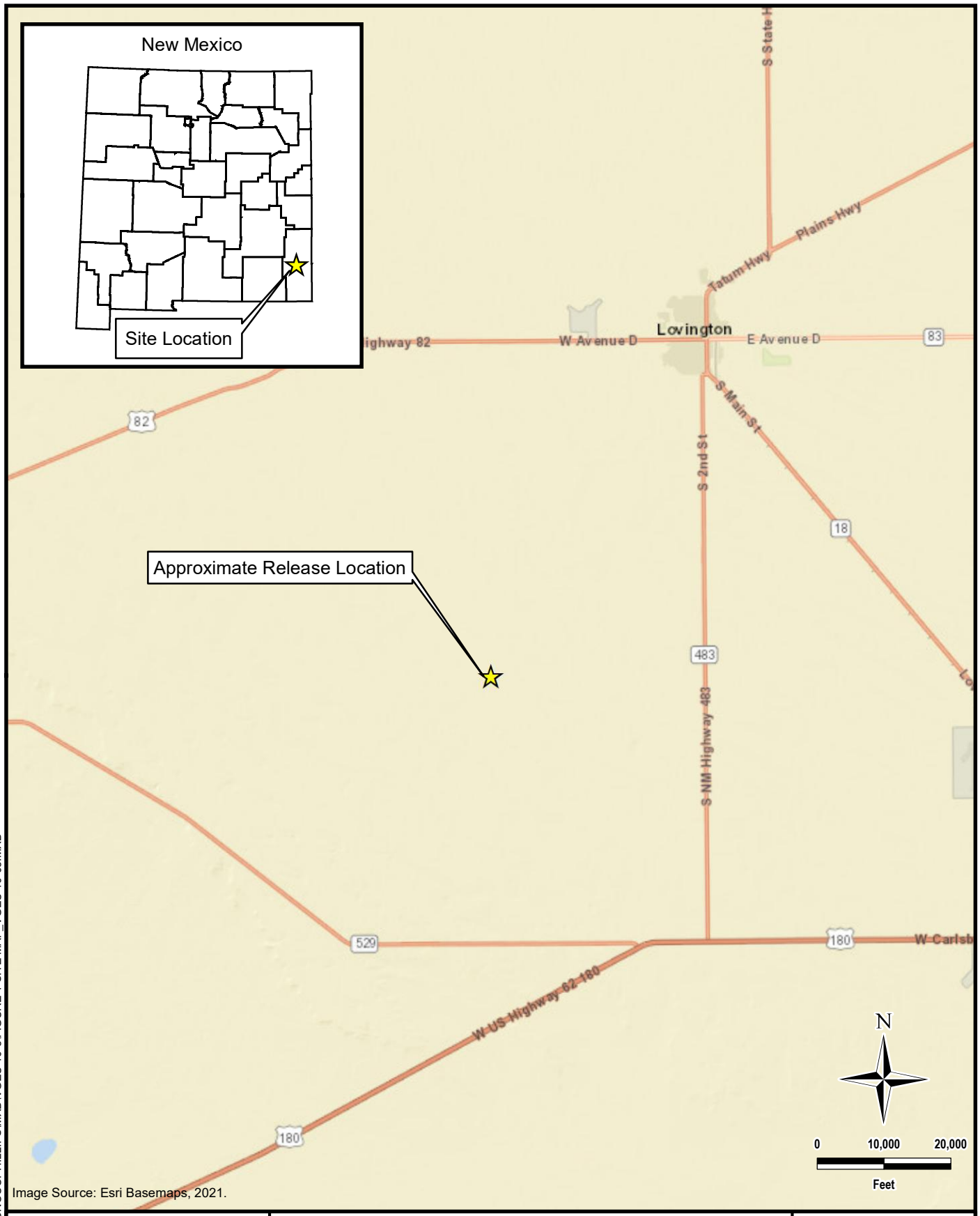
Table 1 – Summary of Analytical Results – Remedial Activities

Appendices:

Appendix A – C-141 Forms
Appendix B – Site Characterization Data
Appendix C – Laboratory Analytical Data
Appendix D – Photographic Documentation

NAPP2116770257

FIGURES



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU 10-3\FIGURE 1 SITE MAP_VGEU 10-03.MXD

TETRA TECH
www.tetratech.com
901 West Wall Street, Suite 100
Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

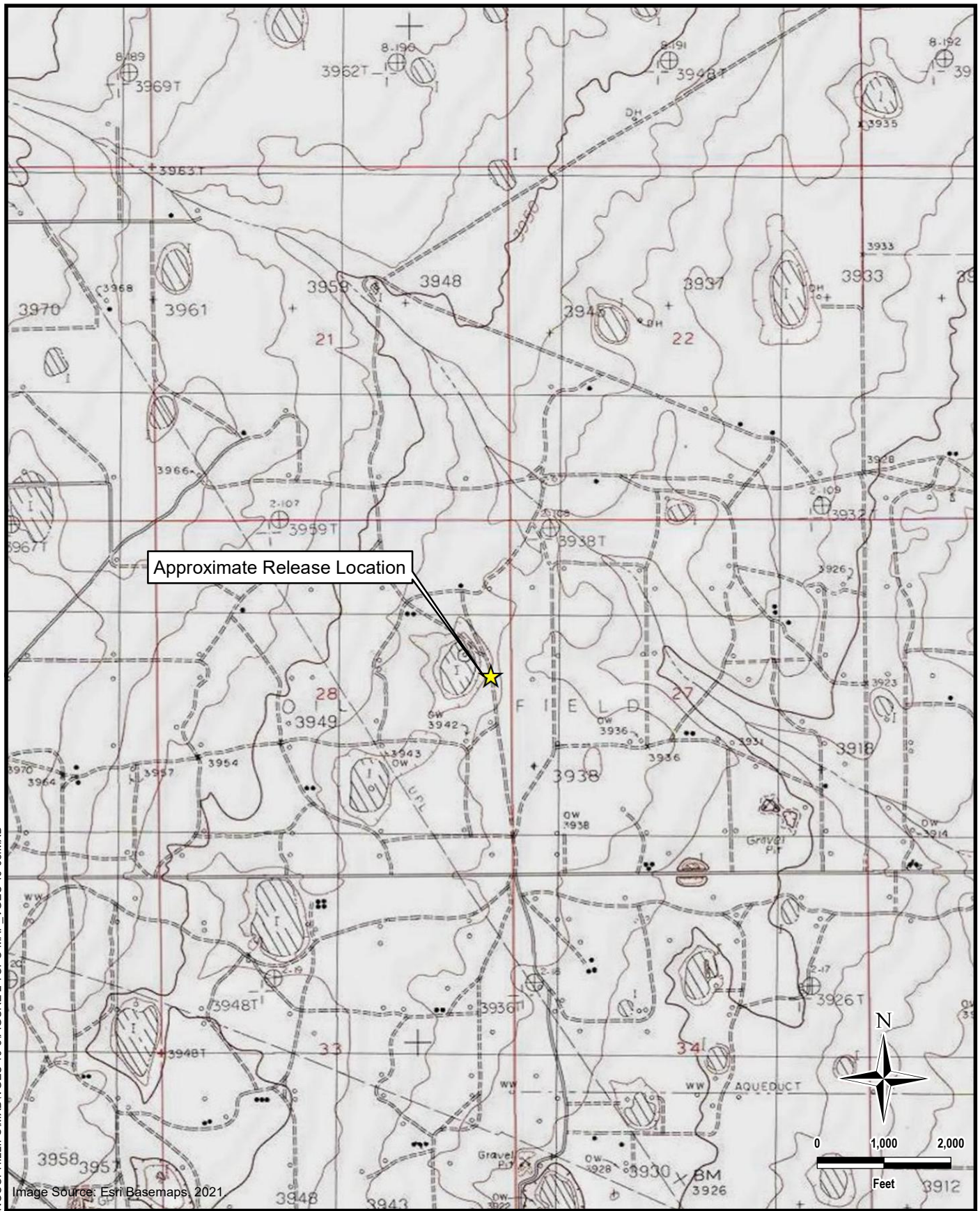
CONOCOPHILLIPS

NAPP2116770257
(32.806762°, -103.455150°)
LEA COUNTY, NEW MEXICO

VGEU 10-03 TUBING RELEASE
SITE LOCATION MAP

PROJECT NO.:	212C-MD-02377
DATE:	AUGUST 26, 2021
DESIGNED BY:	AAM

Figure No.
1



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU 10-3\FIGURE 2 TOPO MAP_VGEU 10-03.MXD

TETRA TECH
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Midland, Texas 79701
Phone: (432) 682-4559
Fax: (432) 682-3946

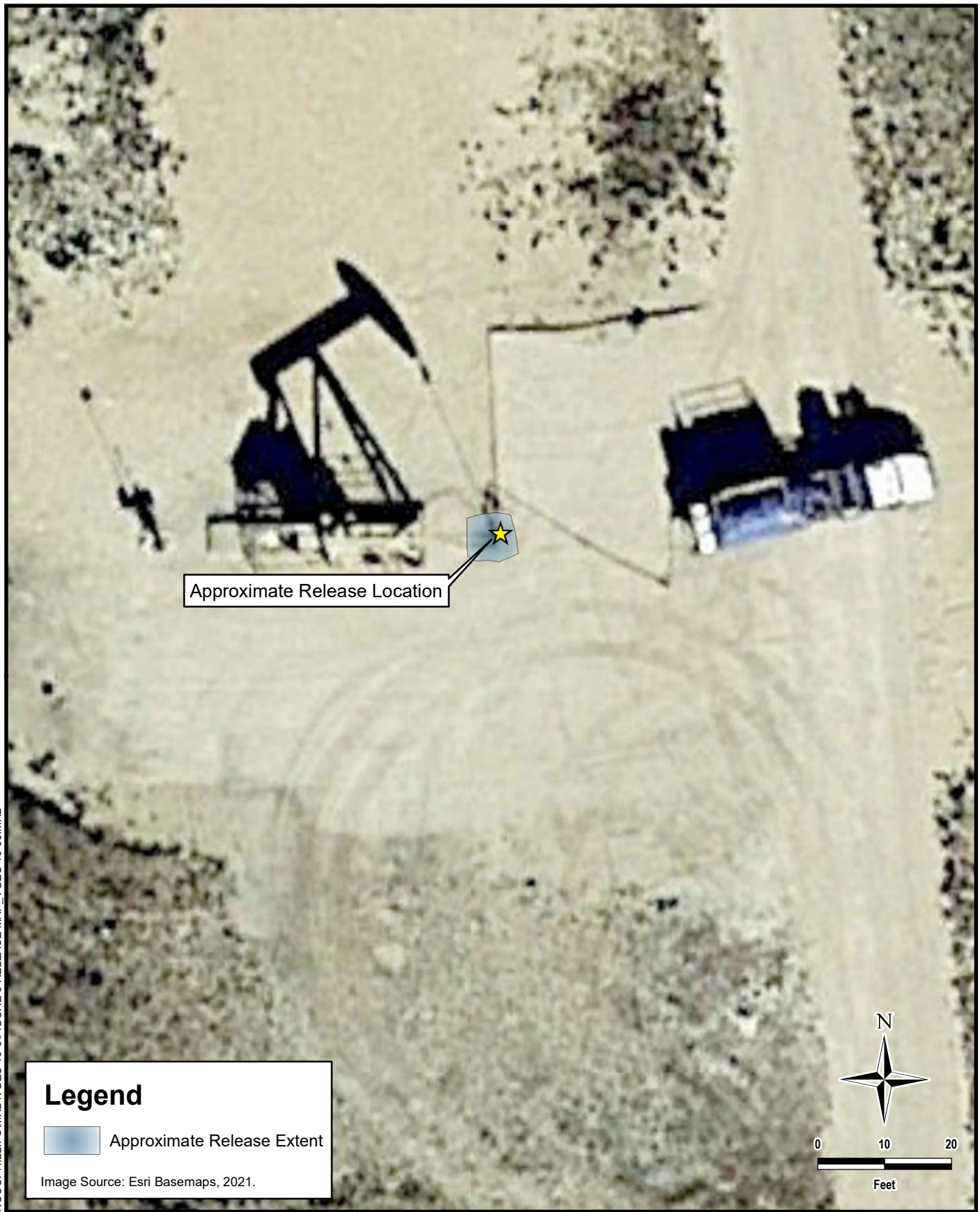
CONOCOPHILLIPS

NAPP2116770257
(32.806762°, -103.455150°)
LEA COUNTY, NEW MEXICO

VGEU 10-03 TUBING RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02377
DATE:	AUGUST 26, 2021
DESIGNED BY:	AAM

Figure No.
2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU 10-3\FIGURE 3 RELEASE MAP_VGEU 10-03.MXD

TETRA TECH
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Midland, Texas 79701
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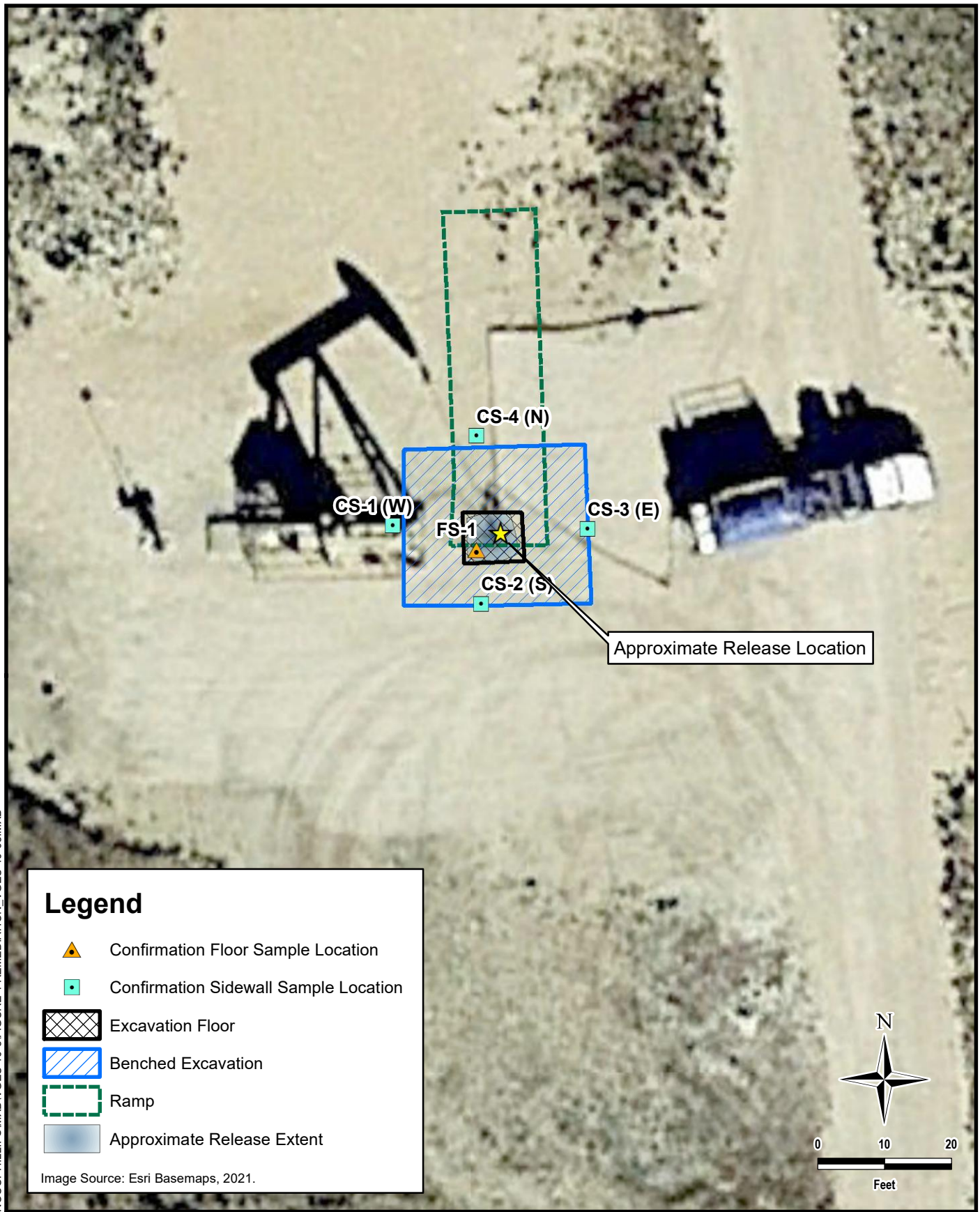
CONOCOPHILLIPS

NAPP2116770257
(32.806762°, -103.455150°)
LEA COUNTY, NEW MEXICO

VGEU 10-03 TUBING RELEASE
APPROXIMATE RELEASE EXTENT

PROJECT NO.:	212C-MD-02377
DATE:	AUGUST 26, 2021
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\VGEU 10-3\FIGURE 4 REMEDIATION_VGEU 10-03.MXD

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CONOCOPHILLIPS

NAPP2116770257
(32.806762°, -103.455150°)
LEA COUNTY, NEW MEXICO

VGEU 10-03 TUBING RELEASE REMEDIATION EXTENT

PROJECT NO.:	212C-MD-02377
DATE:	AUGUST 27, 2021
DESIGNED BY:	AAM

Figure No.
4

NAPP2116770257

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
REMEDIAL ACTIVITIES - NAPP2116770257
CONOCOPHILLIPS
VGEU 10-03 TUBING RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth	Field Screening Results		Chloride[1]		BTEX[2]												TPH[3]									
			Chloride	PID			Benzene		Toluene		Ethylbenzene		m,p-Xylene		o-Xylene		Total Xylenes		Total BTEX		GRO		DRO		ORO		Total TPH (GRO+DRO+ORO)	
																					C_6 - C_{10}		> C_{10} - C_{28}		> C_{28} - C_{36}			
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q
CS-1 (W)	8/24/2021	-	375	-	303		< 0.00200		< 0.00200		< 0.00200		< 0.00399		< 0.00200		< 0.00399		< 0.00399		< 49.9		107		< 49.9		107	
CS-2 (S)	8/24/2021	-	450	-	279		< 0.00199		< 0.00199		< 0.00199		< 0.00398		< 0.00199		< 0.00398		< 0.00398		< 50.0		197		65.8		263	
CS-3 (E)	8/24/2021	-	475	-	498		< 0.00202		< 0.00202		< 0.00202		< 0.00403		< 0.00202		< 0.00403		< 0.00403		< 49.8		< 49.8		< 49.8		< 49.8	
CS-4 (N)	8/24/2021	-	275	-	262		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00201		< 0.00402		< 0.00402		< 50.0		142		< 50.0		142	
FS-1 (18')	8/24/2021	18'	300	-	225		< 0.00200		< 0.00200		< 0.00200		< 0.00399		< 0.00200		< 0.00399		< 0.00399		< 50.0		110		< 50.0		110	

NOTES:

ft. Feet
bgs Below ground surface
ppm Parts per million
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
ORO Oil range organics
1 EPA Method 300.0
2 EPA Method 8021B
3 EPA Method 8015B NM

Bold and italicized values indicate exceedance of proposed Remediation RRALs.

Gold highlight represents soil horizons that were removed during deepening of excavation floors.

Green highlight represents soil intervals that were removed during horizontal expansion of excavation sidewalls.

* These iterative samples are located to encompass the original sample location that triggered removal, with further excavation in each area indicated in ().

QUALIFIERS:

APPENDIX A
C-141 Forms

APPENDIX B
Site Characterization Data

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	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 03992	L	LE	3	2	2	28	17S	35E	644426	3631327*	452	125	65	60

Average Depth to Water: **65 feet**

Minimum Depth: **65 feet**

Maximum Depth: **65 feet**

Record Count: 1

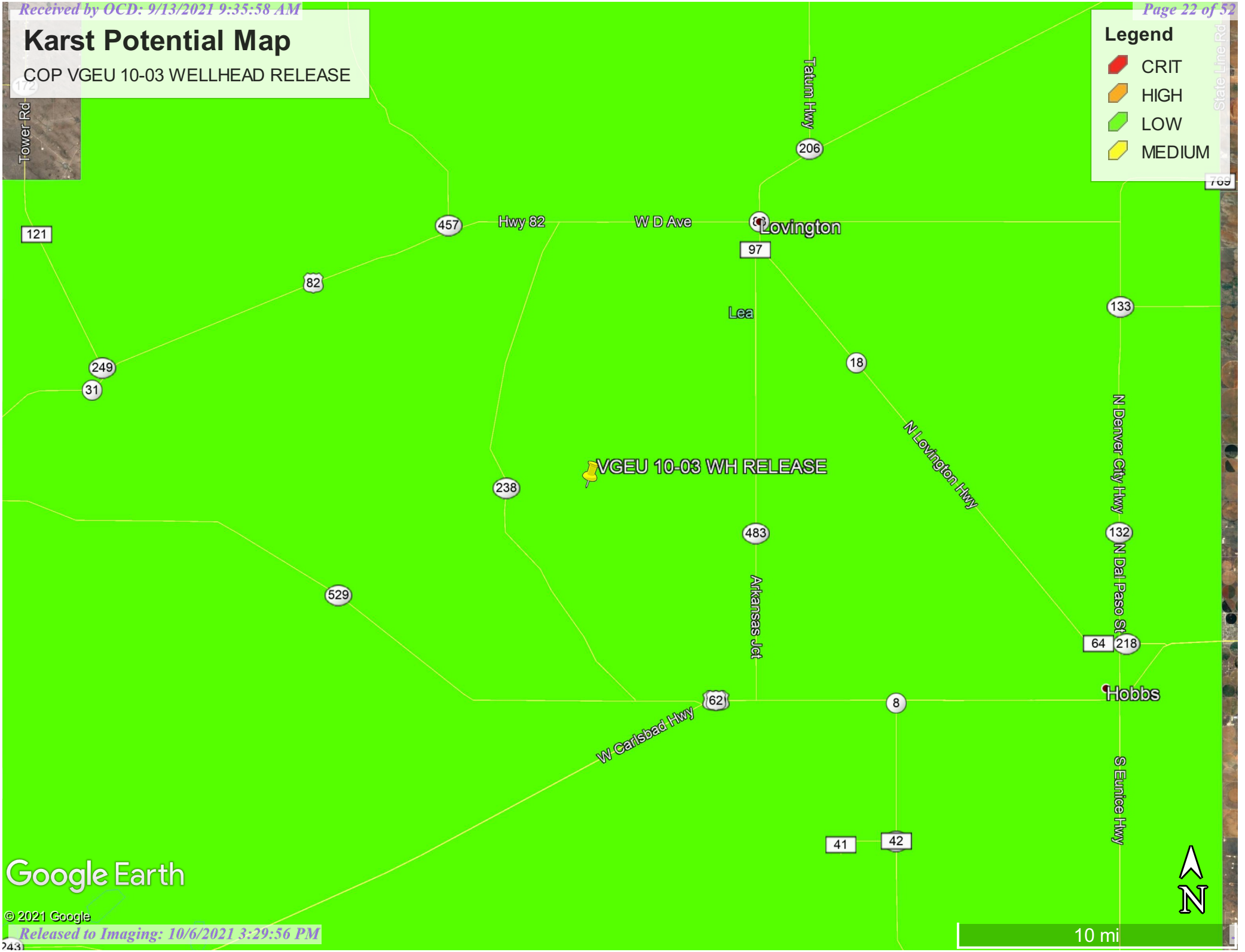
UTMNAD83 Radius Search (in meters):

Easting (X): 644641.523 **Northing (Y):** 3630929.429 **Radius:** 800

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

Karst Potential Map

COP VGEU 10-03 WELLHEAD RELEASE



New Mexico NFHL Data

August 5, 2021

1:4,514

0 0.0375 0.075 0.15 mi

0 0.05 0.1 0.2 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

APPENDIX C
Laboratory Analytical Data

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-5431-1
Laboratory Sample Delivery Group: Lea County, New Mexico
Client Project/Site: COP VGEU 10-03
Revision: 1

For:
Tetra Tech, Inc.
8911 N. Capital of Texas Hwy
Bldg. 2, Ste 2310
Austin, Texas 78759

Attn: Christian Llull

JKramer

Authorized for release by:
9/8/2021 8:22:53 AM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Laboratory Job ID: 880-5431-1
SDG: Lea County, New Mexico

Table of Contents

Definitions/Glossary

Client: Tetra Tech, Inc. Job ID: 880-5431-1
Project/Site: COP VGEU 10-03 SDG: Lea County, New Mexico

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Job ID: 880-5431-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-5431-1

Comments
No additional comments.

Receipt
The samples were received on 8/25/2021 11:27 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.5º C.

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (CCV 880-7067/20). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8015B NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-7064 and analytical batch 880-7038 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Client Sample ID: CS-1 (W)

Date Collected: 08/24/21 11:00
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 18:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 18:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 18:18	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/25/21 11:37	08/25/21 18:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 18:18	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/25/21 11:37	08/25/21 18:18	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		08/25/21 11:37	08/25/21 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*08/25/21 11:37*	*08/25/21 18:18*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*08/25/21 11:37*	*08/25/21 18:18*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/25/21 11:38	08/26/21 04:28	1
Diesel Range Organics (Over C10-C28)	**107**		49.9		mg/Kg		08/25/21 11:38	08/26/21 04:28	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/25/21 11:38	08/26/21 04:28	1
Total TPH	**107**		49.9		mg/Kg		08/25/21 11:38	08/26/21 04:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*08/25/21 11:38*	*08/26/21 04:28*	*1*
o-Terphenyl	*104*		*70 - 130*	*08/25/21 11:38*	*08/26/21 04:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**303**		5.00		mg/Kg			08/25/21 20:51	1

Client Sample ID: CS-2 (S)

Date Collected: 08/24/21 11:10
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		08/25/21 11:37	08/25/21 18:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/25/21 11:37	08/25/21 18:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		08/25/21 11:37	08/25/21 18:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		08/25/21 11:37	08/25/21 18:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		08/25/21 11:37	08/25/21 18:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		08/25/21 11:37	08/25/21 18:44	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		08/25/21 11:37	08/25/21 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*08/25/21 11:37*	*08/25/21 18:44*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*08/25/21 11:37*	*08/25/21 18:44*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/25/21 11:38	08/26/21 04:49	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Client Sample ID: CS-2 (S)

Date Collected: 08/24/21 11:10
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-2

Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	197		50.0		mg/Kg		08/25/21 11:38	08/26/21 04:49	1
Oll Range Organics (Over C28-C36)	65.8		50.0		mg/Kg		08/25/21 11:38	08/26/21 04:49	1
Total TPH	263		50.0		mg/Kg		08/25/21 11:38	08/26/21 04:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*08/25/21 11:38*	*08/26/21 04:49*	*1*
o-Terphenyl	*117*		*70 - 130*	*08/25/21 11:38*	*08/26/21 04:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	279		5.00		mg/Kg			08/25/21 20:56	1

Client Sample ID: CS-3 (E)

Date Collected: 08/24/21 11:20
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		08/25/21 11:37	08/25/21 19:10	1
Toluene	<0.00202	U	0.00202		mg/Kg		08/25/21 11:37	08/25/21 19:10	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		08/25/21 11:37	08/25/21 19:10	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		08/25/21 11:37	08/25/21 19:10	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		08/25/21 11:37	08/25/21 19:10	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		08/25/21 11:37	08/25/21 19:10	1
Total BTEX	<0.00403	U	0.00403		mg/Kg		08/25/21 11:37	08/25/21 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*08/25/21 11:37*	*08/25/21 19:10*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*08/25/21 11:37*	*08/25/21 19:10*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/25/21 11:38	08/26/21 05:10	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/25/21 11:38	08/26/21 05:10	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/25/21 11:38	08/26/21 05:10	1
Total TPH	<49.8	U	49.8		mg/Kg		08/25/21 11:38	08/26/21 05:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*08/25/21 11:38*	*08/26/21 05:10*	*1*
o-Terphenyl	*115*		*70 - 130*	*08/25/21 11:38*	*08/26/21 05:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	498		4.98		mg/Kg			08/25/21 21:02	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Client Sample ID: CS-4 (N)

Date Collected: 08/24/21 11:30
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-4

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/25/21 11:37	08/25/21 19:35	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/25/21 11:37	08/25/21 19:35	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		08/25/21 11:37	08/25/21 19:35	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		08/25/21 11:37	08/25/21 19:35	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		08/25/21 11:37	08/25/21 19:35	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		08/25/21 11:37	08/25/21 19:35	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		08/25/21 11:37	08/25/21 19:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*08/25/21 11:37*	*08/25/21 19:35*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*08/25/21 11:37*	*08/25/21 19:35*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/25/21 11:38	08/26/21 05:31	1
Diesel Range Organics (Over C10-C28)	**142**		50.0		mg/Kg		08/25/21 11:38	08/26/21 05:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/25/21 11:38	08/26/21 05:31	1
Total TPH	**142**		50.0		mg/Kg		08/25/21 11:38	08/26/21 05:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*08/25/21 11:38*	*08/26/21 05:31*	*1*
o-Terphenyl	*109*		*70 - 130*	*08/25/21 11:38*	*08/26/21 05:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**262**		4.95		mg/Kg			08/25/21 21:07	1

Client Sample ID: FS-1 (18')

Date Collected: 08/24/21 11:50
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-5

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 20:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 20:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 20:01	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		08/25/21 11:37	08/25/21 20:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 20:01	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		08/25/21 11:37	08/25/21 20:01	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		08/25/21 11:37	08/25/21 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*08/25/21 11:37*	*08/25/21 20:01*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*08/25/21 11:37*	*08/25/21 20:01*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/25/21 11:38	08/26/21 05:52	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Client Sample ID: FS-1 (18')

Date Collected: 08/24/21 11:50
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-5

Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**110**		50.0		mg/Kg		08/25/21 11:38	08/26/21 05:52	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/25/21 11:38	08/26/21 05:52	1
Total TPH	**110**		50.0		mg/Kg		08/25/21 11:38	08/26/21 05:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*08/25/21 11:38*	*08/26/21 05:52*	*1*
o-Terphenyl	*122*		*70 - 130*	*08/25/21 11:38*	*08/26/21 05:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**225**		4.95		mg/Kg			08/26/21 00:01	1

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-5431-1	CS-1 (W)	127	99
880-5431-1 MS	CS-1 (W)	108	121
880-5431-1 MSD	CS-1 (W)	95	117
880-5431-2	CS-2 (S)	105	112
880-5431-3	CS-3 (E)	108	114
880-5431-4	CS-4 (N)	109	114
880-5431-5	FS-1 (18')	93	99
LCS 880-7063/1-A	Lab Control Sample	96	105
LCSD 880-7063/2-A	Lab Control Sample Dup	103	118
MB 880-7063/5-A	Method Blank	73	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-5426-A-1-E MS	Matrix Spike	108	105
880-5426-A-1-F MSD	Matrix Spike Duplicate	110	110
880-5431-1	CS-1 (W)	92	104
880-5431-2	CS-2 (S)	107	117
880-5431-3	CS-3 (E)	101	115
880-5431-4	CS-4 (N)	97	109
880-5431-5	FS-1 (18')	107	122
LCS 880-7064/2-A	Lab Control Sample	91	94
LCSD 880-7064/3-A	Lab Control Sample Dup	90	89
MB 880-7064/1-A	Method Blank	111	128

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-7063/5-A
Matrix: Solid
Analysis Batch: 7067

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 17:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 17:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 17:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/25/21 11:37	08/25/21 17:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/25/21 11:37	08/25/21 17:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/25/21 11:37	08/25/21 17:53	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		08/25/21 11:37	08/25/21 17:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*08/25/21 11:37*	*08/25/21 17:53*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*08/25/21 11:37*	*08/25/21 17:53*	*1*

Lab Sample ID: LCS 880-7063/1-A
Matrix: Solid
Analysis Batch: 7067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7063

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09905		mg/Kg		99	70 - 130
Toluene	0.100	0.1058		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1040		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	0.200	0.2102		mg/Kg		105	70 - 130
o-Xylene	0.100	0.1007		mg/Kg		101	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-7063/2-A
Matrix: Solid
Analysis Batch: 7067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7063

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1081		mg/Kg		108	70 - 130	9	35
Toluene	0.100	0.1101		mg/Kg		110	70 - 130	4	35
Ethylbenzene	0.100	0.1104		mg/Kg		110	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2238		mg/Kg		112	70 - 130	6	35
o-Xylene	0.100	0.1073		mg/Kg		107	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

Lab Sample ID: 880-5431-1 MS
Matrix: Solid
Analysis Batch: 7067

Client Sample ID: CS-1 (W)
Prep Type: Total/NA
Prep Batch: 7063

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.09826		mg/Kg		98	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-5431-1 MS
Matrix: Solid
Analysis Batch: 7067

Client Sample ID: CS-1 (W)
Prep Type: Total/NA
Prep Batch: 7063

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00200	U	0.0998	0.08710		mg/Kg		87	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08927		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1765		mg/Kg		88	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08594		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*

Lab Sample ID: 880-5431-1 MSD
Matrix: Solid
Analysis Batch: 7067

Client Sample ID: CS-1 (W)
Prep Type: Total/NA
Prep Batch: 7063

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.101	0.09096		mg/Kg		90	70 - 130	8	35
Toluene	<0.00200	U	0.101	0.07895		mg/Kg		78	70 - 130	10	35
Ethylbenzene	<0.00200	U	0.101	0.08142		mg/Kg		81	70 - 130	9	35
m-Xylene & p-Xylene	<0.00399	U	0.202	0.1611		mg/Kg		80	70 - 130	9	35
o-Xylene	<0.00200	U	0.101	0.07537		mg/Kg		75	70 - 130	13	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-7064/1-A
Matrix: Solid
Analysis Batch: 7038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7064

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/25/21 11:38	08/25/21 21:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/25/21 11:38	08/25/21 21:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/25/21 11:38	08/25/21 21:10	1
Total TPH	<50.0	U	50.0		mg/Kg		08/25/21 11:38	08/25/21 21:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*08/25/21 11:38*	*08/25/21 21:10*	*1*
o-Terphenyl	*128*		*70 - 130*	*08/25/21 11:38*	*08/25/21 21:10*	*1*

Lab Sample ID: LCS 880-7064/2-A
Matrix: Solid
Analysis Batch: 7038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7064

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1043		mg/Kg		104	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-7064/2-A
Matrix: Solid
Analysis Batch: 7038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7064

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (Over C10-C28)			1000	875.2		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*91*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Lab Sample ID: LCSD 880-7064/3-A
Matrix: Solid
Analysis Batch: 7038

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7064

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1062		mg/Kg		106	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	845.1		mg/Kg		85	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

Lab Sample ID: 880-5426-A-1-E MS
Matrix: Solid
Analysis Batch: 7038

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7064

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	995	1261		mg/Kg		124	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	995	1112		mg/Kg		112	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*105*		*70 - 130*

Lab Sample ID: 880-5426-A-1-F MSD
Matrix: Solid
Analysis Batch: 7038

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 7064

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	998	1493	F1	mg/Kg		147	70 - 130	17	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1174		mg/Kg		118	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-6991/1-A
Matrix: Solid
Analysis Batch: 7072

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/25/21 18:19	1

Lab Sample ID: LCS 880-6991/2-A
Matrix: Solid
Analysis Batch: 7072

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	269.2		mg/Kg		108	90 - 110

Lab Sample ID: LCSD 880-6991/3-A
Matrix: Solid
Analysis Batch: 7072

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	269.5		mg/Kg		108	90 - 110	0	20

Lab Sample ID: 880-5367-A-11-B MS
Matrix: Solid
Analysis Batch: 7072

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	23.7		253	281.7		mg/Kg		102	90 - 110

Lab Sample ID: 880-5367-A-11-C MSD
Matrix: Solid
Analysis Batch: 7072

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	23.7		253	282.2		mg/Kg		102	90 - 110	0	20

Lab Sample ID: MB 880-7002/1-A
Matrix: Solid
Analysis Batch: 7075

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/25/21 21:36	1

Lab Sample ID: LCS 880-7002/2-A
Matrix: Solid
Analysis Batch: 7075

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	268.2		mg/Kg		107	90 - 110

Lab Sample ID: LCSD 880-7002/3-A
Matrix: Solid
Analysis Batch: 7075

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	268.6		mg/Kg		107	90 - 110	0	20

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-5371-A-1-B MS
Matrix: Solid
Analysis Batch: 7075

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	22.3		252	282.7		mg/Kg		103	90 - 110		

Lab Sample ID: 880-5371-A-1-C MSD
Matrix: Solid
Analysis Batch: 7075

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	22.3		252	282.7		mg/Kg		103	90 - 110	0	20

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

GC VOA

Prep Batch: 7063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5431-1	CS-1 (W)	Total/NA	Solid	5035	
880-5431-2	CS-2 (S)	Total/NA	Solid	5035	
880-5431-3	CS-3 (E)	Total/NA	Solid	5035	
880-5431-4	CS-4 (N)	Total/NA	Solid	5035	
880-5431-5	FS-1 (18')	Total/NA	Solid	5035	
MB 880-7063/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7063/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7063/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5431-1 MS	CS-1 (W)	Total/NA	Solid	5035	
880-5431-1 MSD	CS-1 (W)	Total/NA	Solid	5035	

Analysis Batch: 7067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5431-1	CS-1 (W)	Total/NA	Solid	8021B	7063
880-5431-2	CS-2 (S)	Total/NA	Solid	8021B	7063
880-5431-3	CS-3 (E)	Total/NA	Solid	8021B	7063
880-5431-4	CS-4 (N)	Total/NA	Solid	8021B	7063
880-5431-5	FS-1 (18')	Total/NA	Solid	8021B	7063
MB 880-7063/5-A	Method Blank	Total/NA	Solid	8021B	7063
LCS 880-7063/1-A	Lab Control Sample	Total/NA	Solid	8021B	7063
LCSD 880-7063/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7063
880-5431-1 MS	CS-1 (W)	Total/NA	Solid	8021B	7063
880-5431-1 MSD	CS-1 (W)	Total/NA	Solid	8021B	7063

GC Semi VOA

Analysis Batch: 7038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5431-1	CS-1 (W)	Total/NA	Solid	8015B NM	7064
880-5431-2	CS-2 (S)	Total/NA	Solid	8015B NM	7064
880-5431-3	CS-3 (E)	Total/NA	Solid	8015B NM	7064
880-5431-4	CS-4 (N)	Total/NA	Solid	8015B NM	7064
880-5431-5	FS-1 (18')	Total/NA	Solid	8015B NM	7064
MB 880-7064/1-A	Method Blank	Total/NA	Solid	8015B NM	7064
LCS 880-7064/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	7064
LCSD 880-7064/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	7064
880-5426-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	7064
880-5426-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	7064

Prep Batch: 7064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5431-1	CS-1 (W)	Total/NA	Solid	8015NM Prep	
880-5431-2	CS-2 (S)	Total/NA	Solid	8015NM Prep	
880-5431-3	CS-3 (E)	Total/NA	Solid	8015NM Prep	
880-5431-4	CS-4 (N)	Total/NA	Solid	8015NM Prep	
880-5431-5	FS-1 (18')	Total/NA	Solid	8015NM Prep	
MB 880-7064/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-7064/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-7064/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-5426-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-5426-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

HPLC/IC

Leach Batch: 6991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5431-1	CS-1 (W)	Soluble	Solid	DI Leach	
880-5431-2	CS-2 (S)	Soluble	Solid	DI Leach	
880-5431-3	CS-3 (E)	Soluble	Solid	DI Leach	
880-5431-4	CS-4 (N)	Soluble	Solid	DI Leach	
MB 880-6991/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-6991/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-6991/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-5367-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-5367-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 7002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5431-5	FS-1 (18')	Soluble	Solid	DI Leach	
MB 880-7002/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-7002/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-7002/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-5371-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-5371-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 7072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5431-1	CS-1 (W)	Soluble	Solid	300.0	6991
880-5431-2	CS-2 (S)	Soluble	Solid	300.0	6991
880-5431-3	CS-3 (E)	Soluble	Solid	300.0	6991
880-5431-4	CS-4 (N)	Soluble	Solid	300.0	6991
MB 880-6991/1-A	Method Blank	Soluble	Solid	300.0	6991
LCS 880-6991/2-A	Lab Control Sample	Soluble	Solid	300.0	6991
LCSD 880-6991/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	6991
880-5367-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	6991
880-5367-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	6991

Analysis Batch: 7075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5431-5	FS-1 (18')	Soluble	Solid	300.0	7002
MB 880-7002/1-A	Method Blank	Soluble	Solid	300.0	7002
LCS 880-7002/2-A	Lab Control Sample	Soluble	Solid	300.0	7002
LCSD 880-7002/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	7002
880-5371-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	7002
880-5371-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	7002

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Client Sample ID: CS-1 (W)
Date Collected: 08/24/21 11:00
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	7063	08/25/21 11:37	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7067	08/25/21 18:18	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	7064	08/25/21 11:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7038	08/26/21 04:28	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	6991	08/25/21 14:00	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 20:51	CH	XEN MID

Client Sample ID: CS-2 (S)
Date Collected: 08/24/21 11:10
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	7063	08/25/21 11:37	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7067	08/25/21 18:44	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	7064	08/25/21 11:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7038	08/26/21 04:49	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	6991	08/25/21 14:00	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 20:56	CH	XEN MID

Client Sample ID: CS-3 (E)
Date Collected: 08/24/21 11:20
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	7063	08/25/21 11:37	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7067	08/25/21 19:10	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	7064	08/25/21 11:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7038	08/26/21 05:10	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	6991	08/25/21 14:00	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 21:02	CH	XEN MID

Client Sample ID: CS-4 (N)
Date Collected: 08/24/21 11:30
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	7063	08/25/21 11:37	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7067	08/25/21 19:35	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	7064	08/25/21 11:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7038	08/26/21 05:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	6991	08/25/21 14:00	CH	XEN MID
Soluble	Analysis	300.0		1			7072	08/25/21 21:07	CH	XEN MID

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Client Sample ID: FS-1 (18')

Date Collected: 08/24/21 11:50
Date Received: 08/25/21 11:29

Lab Sample ID: 880-5431-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	7063	08/25/21 11:37	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7067	08/25/21 20:01	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	7064	08/25/21 11:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7038	08/26/21 05:52	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	7002	08/25/21 13:00	CH	XEN MID
Soluble	Analysis	300.0		1			7075	08/26/21 00:01	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: COP VGEU 10-03

Job ID: 880-5431-1
SDG: Lea County, New Mexico

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-5431-1	CS-1 (W)	Solid	08/24/21 11:00	08/25/21 11:29
880-5431-2	CS-2 (S)	Solid	08/24/21 11:10	08/25/21 11:29
880-5431-3	CS-3 (E)	Solid	08/24/21 11:20	08/25/21 11:29
880-5431-4	CS-4 (N)	Solid	08/24/21 11:30	08/25/21 11:29
880-5431-5	FS-1 (18')	Solid	08/24/21 11:50	08/25/21 11:29

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

880-5431 Chain of Custody

of 1

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	COP VGEU 10-03	**Contact Info:**	Email christian llull@tetratech com Phone (512) 338-1667
Project Location: (county, state)	Lea County, New Mexico	**Project #: 212C-MD-02377.13**	
Invoice to:	Accounts Payable 901 West Wall Street Suite 100 Midland Texas 79701		
Receiving Laboratory:	Eurofins-Xenco	**Sampler Signature:**	Adrian Garcia
Comments:	Please also email results to joe tyler@tetratech com		

ANALYSIS REQUEST
(Circle or Specify Method No.)

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 300 0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R		HOLD
	CS - 1 (W)	8/24/2021	1100		X				X			1	N	X		X												X						
	CS - 2 (S)	8/24/2021	1110		X				X			1	N	X		X												X						
	CS - 3 (E)	8/24/2021	1120		X				X			1	N	X		X												X						
	CS - 4 (N)	8/24/2021	1130		X				X			1	N	X		X												X						
	FS - 1 (18)	8/24/2021	1150		X				X			1	N	X		X												X						

Relinquished by: Adrian Garcia	Date 8/25/21	Time 1127	Received by: [signature]
Relinquished by:	Date	Time	Received by: Date 8/25 Time 1127
Relinquished by:	Date	Time	Received by: Date Time

ORIGINAL COPY

LAB USE ONLY

Sample Temperature 4.0/4.5

REMARKS:

- [ ] Standard
- [x] RUSH Same Day (24 hr) 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking # _____

9/8/2021 (Rev. 1)

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 880-5431-1
SDG Number: Lea County, New Mexico

Login Number: 5431
List Number: 1
Creator: Teel, Brianna

List Source: Eurofins Xenco, Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

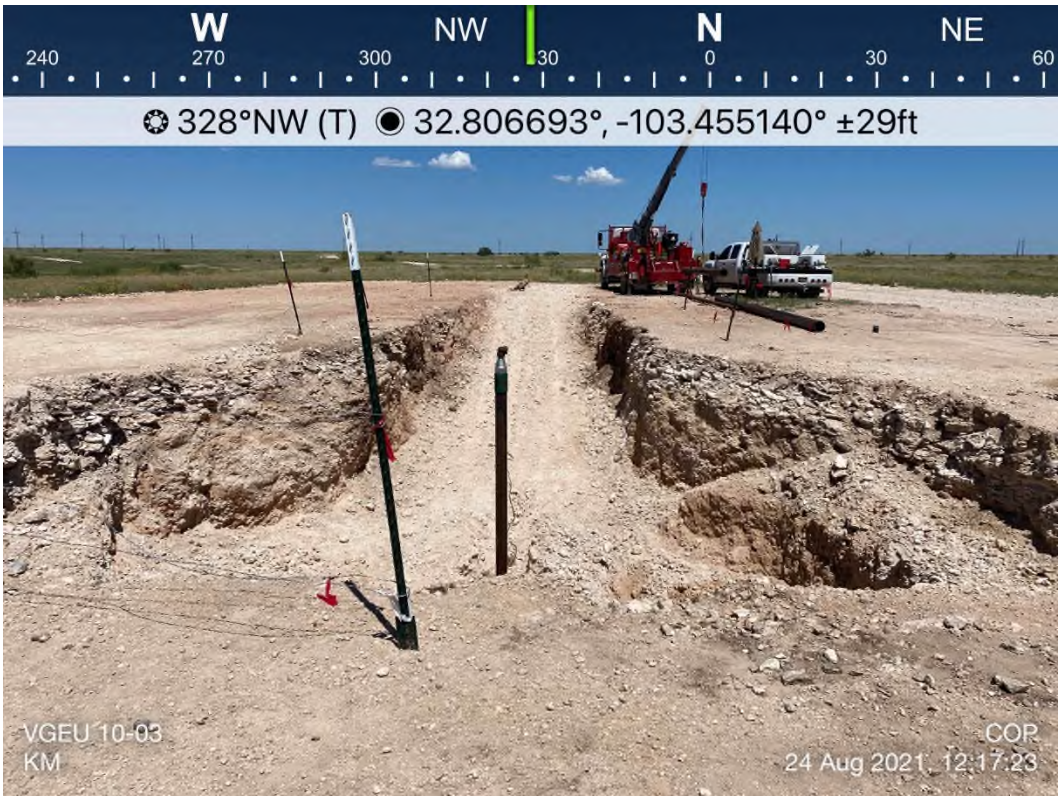
APPENDIX D
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the release point and excavated area.	1
	SITE NAME	VGEU 10-03 Tubing Release	8/23/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View south of the release point and excavated area.	2
	SITE NAME	VGEU 10-03 Tubing Release	8/24/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View northeast of the release area, excavated area and access ramp.	3
	SITE NAME	VGEU 10-03 Tubing Release	8/24/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of excavated area and benching.	4
	SITE NAME	VGEU 10-03 Tubing Release	8/24/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View northwest of the release area, tubing and access ramp.	5
	SITE NAME	VGEU 10-03 Tubing Release	8/24/2021

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

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 47957
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	10/6/2021