TETRA TECH

November 9, 2022

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

Re: Release Characterization, Site Assessment and Closure Report
ConocoPhillips Company
Buck Federal Central Tank Battery Release
Unit Letter O, Section 17, Township 26 South, Range 32 East
Lea County, New Mexico
Incident ID NAPP2128035834

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips Company (COP) to evaluate a release that occurred at the Buck Federal Central Tank Battery (CTB). The release footprint is located in Public Land Survey System (PLSS) Unit Letter O, Section 17, Township 26 South, Range 32 East, in Lea County, New Mexico (Site). The release site coordinates are 32.037538°, -103.696660°. The Site location is shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico Form C-141 Initial Report (Appendix A), the release was discovered on September 24, 2021. The release occurred as the result of equipment failure, specifically corrosion on a 1-inch plug that leads to a transfer pump. Approximately 7.9 barrels (bbls) of produced water were reported released, of which 3 bbls were recovered. The produced water was released into a partially lined secondary containment. The spill calculator submitted to New Mexico Oil Conservation District (NMOCD) along with the C-141 documented that an area of approximately 1,200 square feet was impacted. Charles R. Beauvais II submitted the initial Form C-141 on October 7, 2021.

NMOCD received this initial Form C-141 same day. The NMOCD Incident ID for this release is NAPP2128035834. COP submitted an extension request for this incident on Thursday, December 30, 2021. The request for an extension to March 30, 2022 was approved by Robert Hamlet via email on January 4, 2022. Regulatory correspondence is included in Appendix B.

C-141 Completeness and Accuracy

The Form C-141 submitted to the NMOCD mistakenly places the Site in PLSS Unit Letter D, Section 30, Township 26 South, and Range 32 East. Additionally, the latitude and longitude given on the Form C-141 (32.021533°, -103.414822°) do not correspond to the Site, rather these coordinates are approximately 16.5 miles to the east. The C-141 included in this submittal has been revised to correct these errors.

SITE CHARACTERIZATION

A site characterization was performed and no sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, stream bodies, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the distances specified in 19.15.29 New Mexico Administrative Code (NMAC). The Site is in an area of medium karst potential.

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

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells within ½ mile (800 meters) of the Site. There are five (5) water wells within 2,000 meters of the site, the nearest being 1,801 meters, with an average depth to groundwater of 240 feet below ground surface (bgs).

As the available water level information was from wells farther than ½ mile away from the Site, COP elected to drill a boring to verify depth to groundwater. On September 27, 2022, a licensed drilling subcontractor was onsite to drill a groundwater determination borehole (DTW) to 55 feet bgs . The borehole was located outside the reported release footprint, on the east side of the lease pad. The borehole was dry upon completion, and soils were dry from surface to total depth. The depth to groundwater in the area was thus verified as greater than 50 feet bgs. The borehole was plugged with 3/8" bentonite chips. The borehole coordinates are approximately 32.037733°, -103.695950°. The site characterization data and boring log are included in Appendix C. The location of the groundwater depth determination boring in relation to the release area footprint is shown on Figure 4.

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 chloride in soil.

Based on the site characterization and in accordance with Table I of 19.15.29.12 NMAC, the RRALs for the Site are as follows:

Constituent	Site RRAL
Chloride	10,000 mg/kg
TPH (GRO+DRO+MRO)	2,500 mg/kg
TPH (GRO+DRO)	1,000 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

Additionally, in accordance with the NMOCD guidance *Procedures for Implementation of the Spill Rule (19.15.29 NMAC)* (September 6, 2019), the following reclamation requirements for surface soils (0-4 feet bgs) outside of active oil and gas operations are as follows:

Constituent	Reclamation Requirement
Chloride	600 mg/kg
TPH	100 mg/kg
BTEX	50 mg/kg

INITIAL RESPONSE

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 2021. The interior of the earthen berm (entirety of the footprint of the release) was excavated to approximately 4 feet bgs to remove the visibly impacted soil. The approximate release footprint and initial response area are shown on Figure 3. The initial response area was backfilled with clean material prior to assessment.

INITIAL SITE ASSESSMENT

Tetra Tech personnel were onsite to delineate and sample the release area on July 20, 2022. A total of three (3) soil borings (AH-1 through AH-3) were installed using a hand auger within the release extent to evaluate the vertical extent of the release. Four (4) trenches were dug using a mini excavator to evaluate the horizontal extent of the release. The boring and trench locations are shown on figure 4.

A total of eleven (11) samples were collected from the sample locations, transferred under chain of custody and analyzed within appropriate holding times by Eurofins-Xenco Environmental Testing (Xenco) in Midland, TX. The soil samples were analyzed for TPH via Method 8015 Modified, chloride via EPA Method 300.0, and BTEX via Method 8021B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix D. Photographic documentation of the July 2022 assessment activities is included in appendix E.

Results from the July 2022 soil sampling event are summarized in Table 1. The analytical results demonstrated that the initial response inside the earthen berm was effective and sufficient for remediation purposes. The analytical results associated with the sampling event were below proposed Site RRALs for on-pad releases. Analytical results associated with boring locations AH-2 and AH-3, as well as trench location T-3 exceeded the reclamation standard for chloride of 600 mg/kg at the 4-5', 1-2', and 0-1' depth intervals, respectively. Location T-3 is far outside the reported release extent, and impact noted in this area is not believed to be associated with the subject release. While the release was successfully horizontally delineated to the north, east and south, horizontal delineation to the west and vertical delineation was not obtained during the July 2022 sampling event.

ADDITIONAL SITE ASSESSMENT

Tetra Tech personnel were onsite to complete delineation on September 27 and 28, 2022. A total of two (2) soil borings (BH-1 and BH-2) to depths of 35 and 20 feet bgs, respectively. BH-1 was installed inside the berm to define the vertical extent of the release and to assess the extent of impacted soil. BH-2 was installed west of the containment berm to define the western horizontal extent of the release area.

A total of eighteen (18) soil samples were collected from the two boring locations, transferred under chain of custody and analyzed within appropriate holding times by Cardinal Laboratories in Hobbs, NM. The samples were analyzed for TPH via Method 8015 Modified, chloride via SM4500Cl-B, and BTEX via Method 8021B . Copies of analytical reports and chain-of-custody documentation are included in Appendix D.

All analytical results from the additional site assessment activities were below Site RRALs. The analytical results associated with sample location BH-1 were below the delineation standards in sample depth intervals 29-30' and 34-35'; thus vertical delineation was achieved. The analytical results associated with BH-2 were below the delineation standards and duly completed horizontal delineation of the release area. The results of the September 2022 sampling event are summarized in Table 1. Photographic documentation of the September 2022 assessment activities is included in Appendix E.

SITE RECLAMATION AND RESTORATION PLAN

Based on the site characterization, the remaining soils on the developed production lease pad meet the closure criteria of Table I of 19.15.29.12 NMAC. In accordance with 19.15.29.12 and 19.15.29.13 NMAC, final reclamation of any impact within the lease pad area shall take place once the Site is no longer being used for oil and gas operations. The total remediated area encompassed a surface area of approximately 800 square feet. Collected samples area representative of approximately 200 square feet of remediated area. Remediated area and sample locations are indicated in Figure 4.

Although analytical results associated with the AH-3 (1-2') and T-3 (0-1') exceeded the reclamation requirements used to complete restoration, the remaining contamination is on a developed pad, fully delineated, and does not pose an imminent risk to human health, the environment, or groundwater. On-site reclamation and restoration will occur once the battery is abandoned, and operations have ceased at this active well pad.

CONCLUSION

Based on the results of the site assessment, ConocoPhillips respectfully requests closure of the incident. All analytical results associated with the site assessment were below proposed Site RRALs; therefore, no further remediation of the on-pad release footprint is required. Although analytical results associated with the collected samples slightly exceed the reclamation RRAL used to complete restoration, the remaining impact is on a developed pad, fully delineated, and does not pose an imminent risk to human health, the environment, or groundwater. 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 during the initial response remedial activities.

Based on the above, ConocoPhillips respectfully that NMOCD will consider delaying reclamation activities at the Site until the end of life of the battery. On-site reclamation and restoration shall take place in accordance with 19.15.29.13 NMAC once the battery is abandoned and is no longer being used for oil and gas operations. The final C-141 forms are enclosed in Appendix A.

If you have any questions or comments concerning the assessment activities for this site, please call me at (512) 560-9064.

Sincerely,
Tetra Tech, Inc.

Nicholas M. Poole
Project Lead

Christian M. Llull, P.G.
Project Manager

cc:
Mr. Sam Widmer, RMR – ConocoPhillips
Mr. Charles Beauvais, GPBU - ConocoPhillips

List of Attachments

Figures:

- Figure 1 – Site Location Map
- Figure 2 – Site Location/Topographic Map
- Figure 3 – Approximate Release Extent and Initial Response
- Figure 4 – Site Assessment

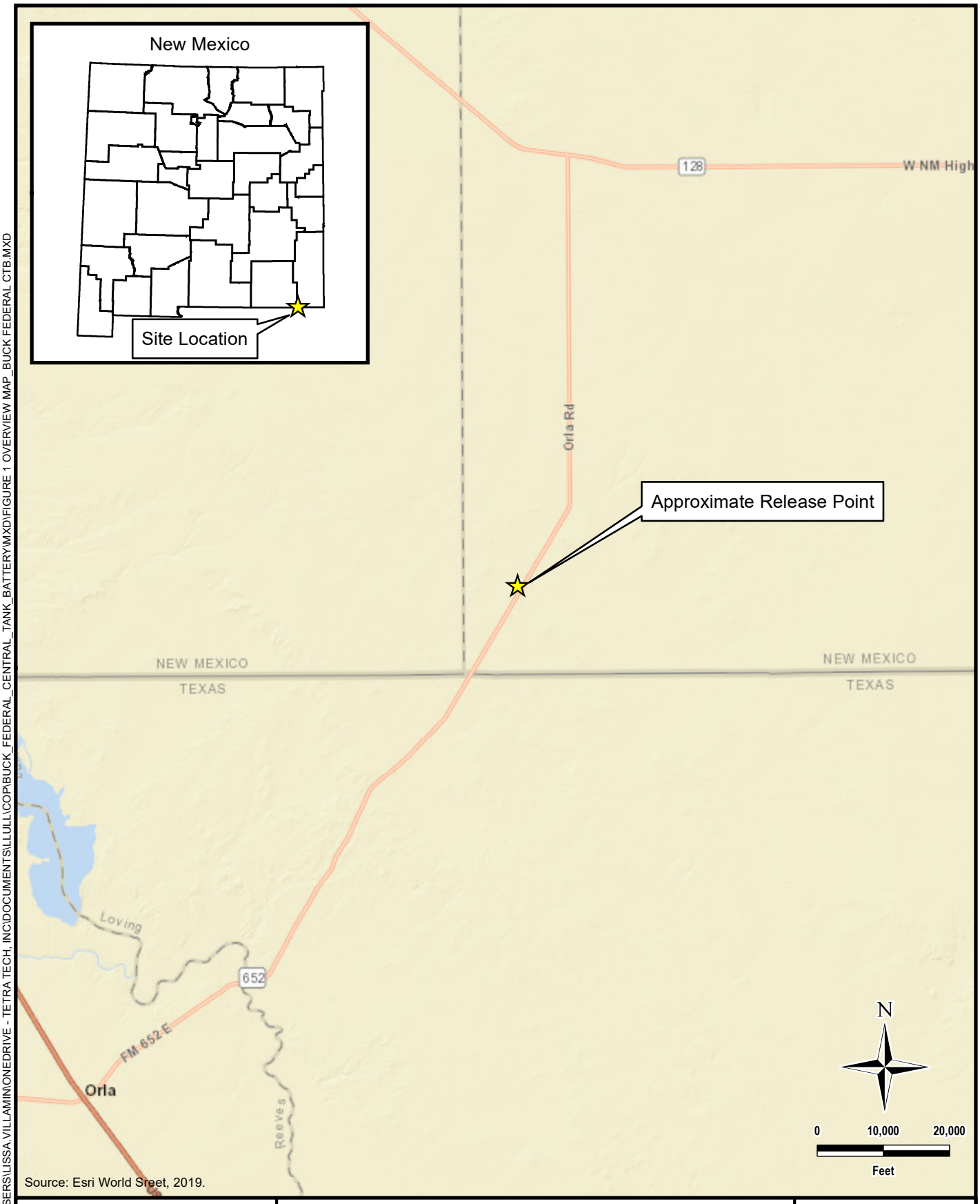
Tables:

- Table 1 – Summary of Analytical Results – Soil Assessment

Appendices:

- Appendix A – C-141 Form
- Appendix B – Regulatory Correspondence
- Appendix C – Site Characterization Data
- Appendix D – Laboratory Analytical Reports
- Appendix E – Photographic Documentation

FIGURES



DOCUMENT PATH: C:\USERS\LISSA.VILLAMIN\ONEDRIVE - TETRA TECH, INC\DOCUMENTS\LLULL\COP\BUCK_FEDERAL_CENTRAL_TANK_BATTERY\MXD\FIGURE 1 OVERVIEW MAP_BUCK FEDERAL CTB.MXD

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CONOCOPHILLIPS

NAPP2128035834
(32.037538°, -103.696660°)
LEA COUNTY, NEW MEXICO

BUCK FEDERAL CTB RELEASE
OVERVIEW MAP

PROJECT NO.:	212C-MD-02589
DATE:	APRIL 18, 2022
DESIGNED BY:	LMV

Figure No.
1

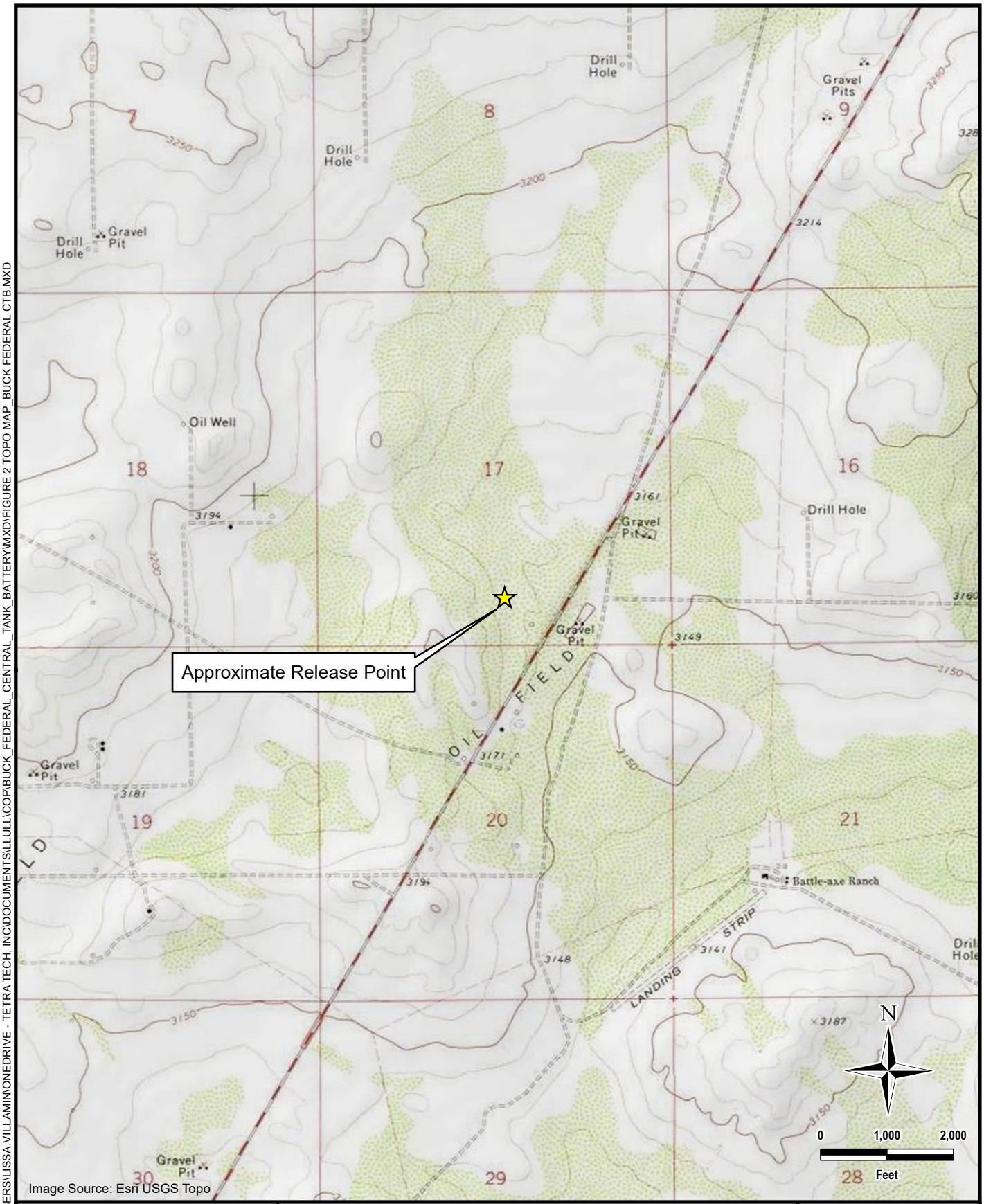

Image Source: Esri USGS Topo

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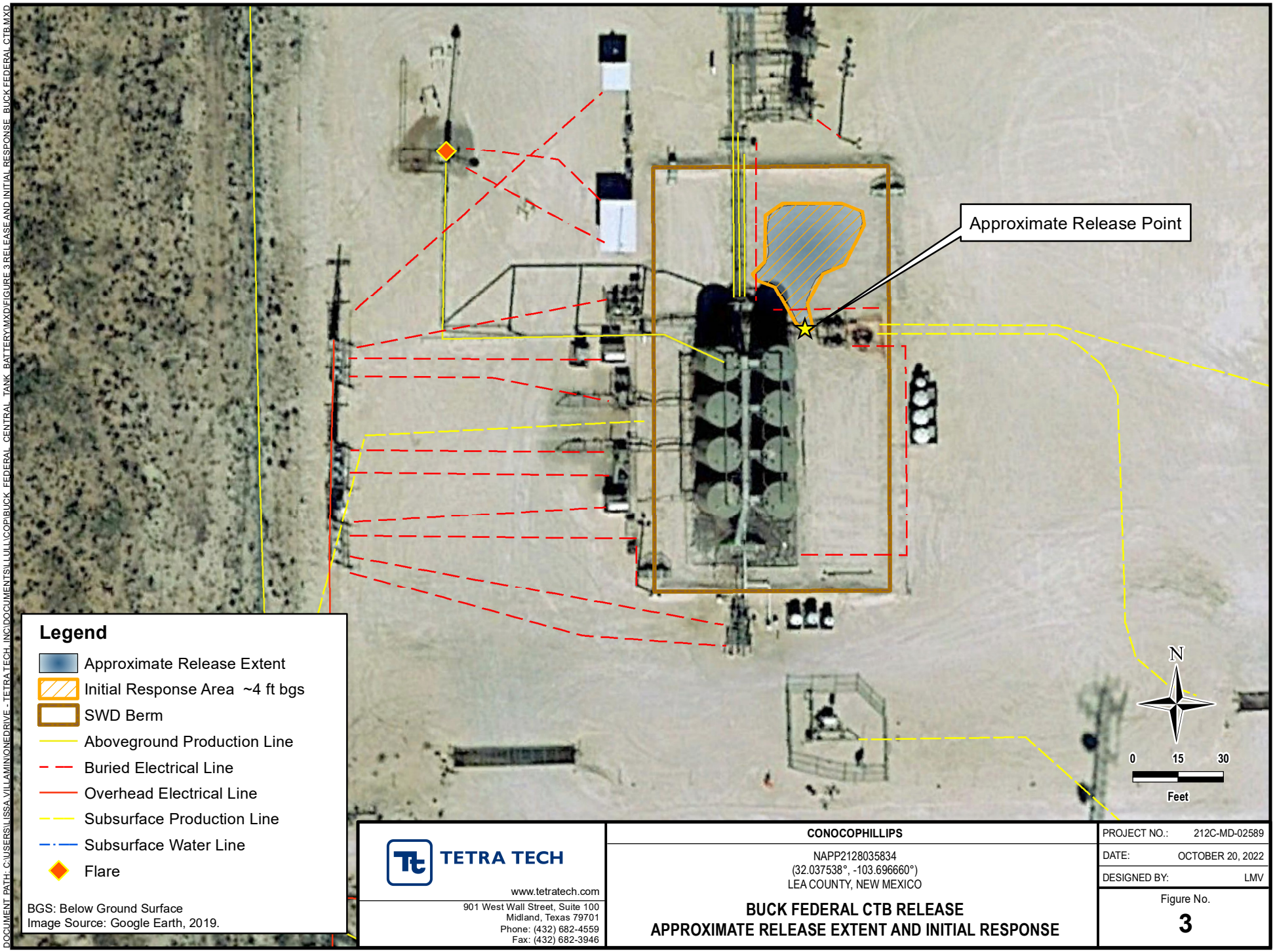
LEA COUNTY, NEW MEXICO

BUCK FEDERAL CTB RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02589
DATE:	APRIL 18, 2022
DESIGNED BY:	LMV

Figure No.
2



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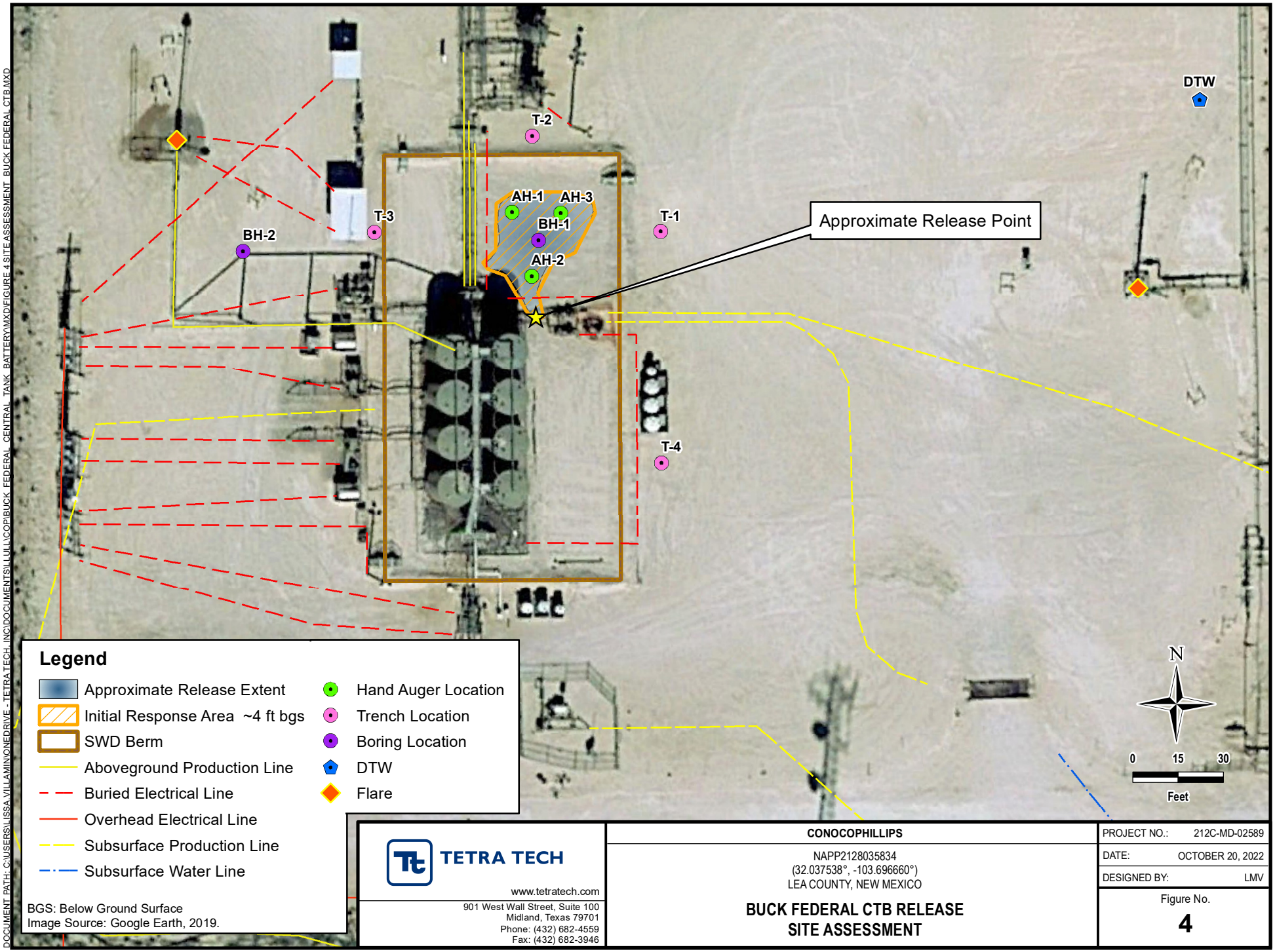
CONOCOPHILLIPS

NAPP2128035834
(32.037538°, -103.696660°)
LEA COUNTY, NEW MEXICO

BUCK FEDERAL CTB RELEASE
APPROXIMATE RELEASE EXTENT AND INITIAL RESPONSE

PROJECT NO.:	212C-MD-02589
DATE:	OCTOBER 20, 2022
DESIGNED BY:	LMV

Figure No.
3



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CONOCOPHILLIPS

NAPP2128035834
(32.037538°, -103.696660°)
LEA COUNTY, NEW MEXICO

BUCK FEDERAL CTB RELEASE SITE ASSESSMENT

PROJECT NO.:	212C-MD-02589
DATE:	OCTOBER 20, 2022
DESIGNED BY:	LMV

Figure No.
4

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT- NAPP2128035834
CONOCOPHILLIPS
BUCK FEDERAL CTB RELEASE
LEA COUNTY, NM

19.15.29.12 NMAC Closure Criteria for Soils Impacted by a Release (51-100 ft):				Chlorides[1]		BTEX[2]								TPH[3]							
				< 10,000 mg/kg		< 10 mg/kg							< 50 mg/kg							< 2,500 mg/kg	< 1,000 mg/kg
Sample ID	Sample Date	Sample Depth Interval	Field Screening Results	Chloride		Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		MRO		Total TPH (GRO+DRO+MRO)	GRO+DRO
			Chlorides													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	mg/kg
AH-1	7/20/2022	0-1	-	16.5		< 0.00200		< 0.00200		< 0.00200		< 0.00399		< 0.00399		< 49.9		< 49.9		< 49.9		< 49.9	< 49.9
		1-2	-	23.7		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00402		< 49.9		< 49.9		< 49.9		< 49.9	< 49.9
AH-2	7/20/2022	0-1	-	38.6		< 0.00199		< 0.00199		< 0.00199		< 0.00398		< 0.00398		< 50.0		< 50.0		< 50.0		< 50.0	< 50.0
		2-3	-	81.0		< 0.00200		< 0.00200		< 0.00200		< 0.00400		< 0.00400		< 49.9		< 49.9		< 49.9		< 49.9	< 49.9
		4-5	-	1,930		< 0.00200		< 0.00200		< 0.00200		< 0.00401		< 0.00401		< 49.8		< 49.8		< 49.8		< 49.8	< 49.8
AH-3	7/20/2022	0-1	-	35.7		< 0.00202		< 0.00202		< 0.00202		< 0.00403		< 0.00403		< 50.0		< 50.0		< 50.0		< 50.0	< 50.0
		1-2	-	1,150		< 0.00198		< 0.00198		< 0.00198		< 0.00397		< 0.00397		< 50.0		< 50.0		< 50.0		< 50.0	< 50.0
T-1	7/20/2022	0-1	-	93.6		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00402		< 50.0		< 50.0		< 50.0		< 50.0	< 50.0
T-2	7/20/2022	0-1	-	60.8		< 0.00202		< 0.00202		< 0.00202		< 0.00403		< 0.00403		< 49.9		< 49.9		< 49.9		< 49.9	< 49.9
T-3	7/20/2022	0-1	-	1,500		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00402		< 50.0		< 50.0		< 50.0		< 50.0	< 50.0
T-4	7/20/2022	0-1	-	500		< 0.00202		< 0.00202		< 0.00202		< 0.00403		< 0.00403		< 49.9		< 49.9		< 49.9		< 49.9	< 49.9
BH-1	9/28/2022	0-1	158	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		2-3	219	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		3-4	376	160.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		4-5	1,540	992		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		6-7	2,350	1,680		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		8-9	1300	944		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		28.5		< 10.0		28.5	28.5
		14-15	2250	2,000		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		19-20	1,710	1,800		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		24-25	970	1,580		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		29-30	400	224		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		34-35	511	336		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
BH-2	9/27/2022	0-1	203	112		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		2-3	429	192		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		4-5	594	176		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		6-7	577	224		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		8-9	376	208		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		14-15	488	336		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0
		19-20	246	208		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	< 10.0

NOTES:

ft. Feet

bgs Below ground surface

mg/kg Milligrams per kilogram

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

1 Method SM4500Cl-B

2 Method 8021B

3 Method 8015M

APPENDIX A
C-141 Forms

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	Conoco Phillips	OGRID	217817
Contact Name	Charles R. Beauvais II	Contact Telephone	(575) 988 - 2043
Contact email	Charles.R.Beauvais@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2128035834
Contact mailing address	15 W. London RD. Loving, NM 88256		

Location of Release Source

Latitude ~~32.021533~~ 32.037538° Longitude ~~-103.414822~~ -103.696660°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Buck Federal CTB	Site Type	Tank Battery
Date Release Discovered	September 24, 2021	API# *(if applicable)*	

Unit Letter	Section	Township	Range	County
~~D~~ O	~~30~~ 17	26S	~~35E~~ 32E	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)
■ Produced Water	Volume Released (bbls) 7.9	Volume Recovered (bbls) 3
	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

Cause of release: 1" plug that leads to transfer pump had corroded and fell off. Produced water spilled from primary containment to partially lined secondary containment. Approximately 7.9 bbls released, recovered volume via vac-truck was 3 bbls of standing fluids.

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)?

Notice was made by Charles Beauvais, Environmental Coordinator, at 2:30 PM, on 09/27/2021 via email to Bradford.billings@state.nm. Also, an online submittal with payment for submittals was made to NMOCD by Brittany Esparza.

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: Charles R. Beauvais II Title: Environmental Engineer

Signature: Charles R. Beauvais II Date: 10/7/2021

email: Charles.R.Beauvais@ConocoPhillips.com Telephone: (575) 988 - 2043

C-141 revised to correct inconsistencies and submitted via the payment portal. cml.

OCD Only

Received by: Ramona Marcus Date: 10/07/2021

NAPP2128035834

L48 Spill Volume Estimate Form

Facility Name & Number:	Buck / Federal CTB
Asset Area:	Zia Hills
Release Discovery Date & Time:	9-24-2021 @ 3:17pm
Release Type:	Produced Water
Provide any known details about the event:	Corroded 1" plug

Spill Calculation - On Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Deepest point in each of the areas (in.)	No. of boundaries of "shore" in each area	Estimated *Pool* Area (sq. ft.)	Estimated Average Depth (ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	31.0	28.0	1.75	3	868.000	0.049	7.511	0.002	7.529			
Rectangle B	35.0	10.0	0.25	3	350.000	0.007	0.433	0.000	0.433			
Rectangle C					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle D					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle E					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle F					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle G					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle H					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
Rectangle I					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
[illegible]					0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			
								Total Volume Release:	7.962			

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: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 54678
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	10/7/2021

Incident ID	NAPP2128035834
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?	> 50 (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	NAPP2128035834
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: Sam Widmer Title: Principal Program Manager

Signature: DocuSigned by: Sam Widmer 5454CA5BAD33498... Date: Nov-04-2022

email: Sam.Widmer@conocophillips.com Telephone: 281-206-5298

OCD Only

Received by: Jocelyn Harimon Date: 11/10/2022

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2128035834
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: Sam Widmer Title: Principal Program Manager

Signature: DocuSigned by: Sam Widmer 5454CA5BAD33498... Date: Nov-04-2022

email: Sam.Widmer@conocophillips.com Telephone: 281-206-5298

OCD Only

Received by: Jocelyn Harimon Date: 11/10/2022

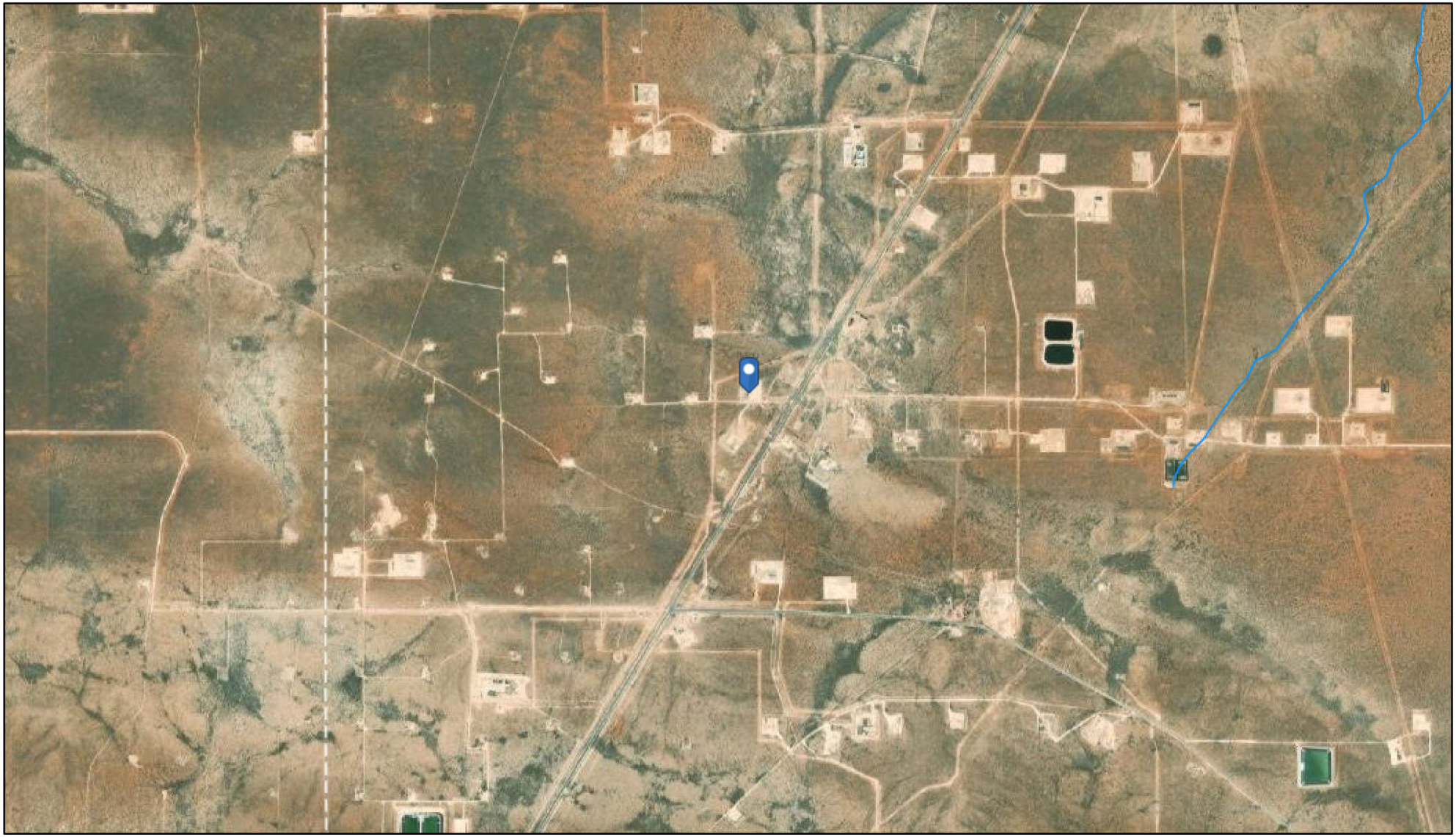
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance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

Closure Approved by: Jennifer Nobui Date: 12/09/2022

Printed Name: Jennifer Nobui Title: Environmental Specialist A

APPENDIX B
Site Characterization Data

NM OCD Water Bodies



8/10/2022, 4:32:29 PM

OSE Streams

1:36,112

0 0.25 0.5 1 mi

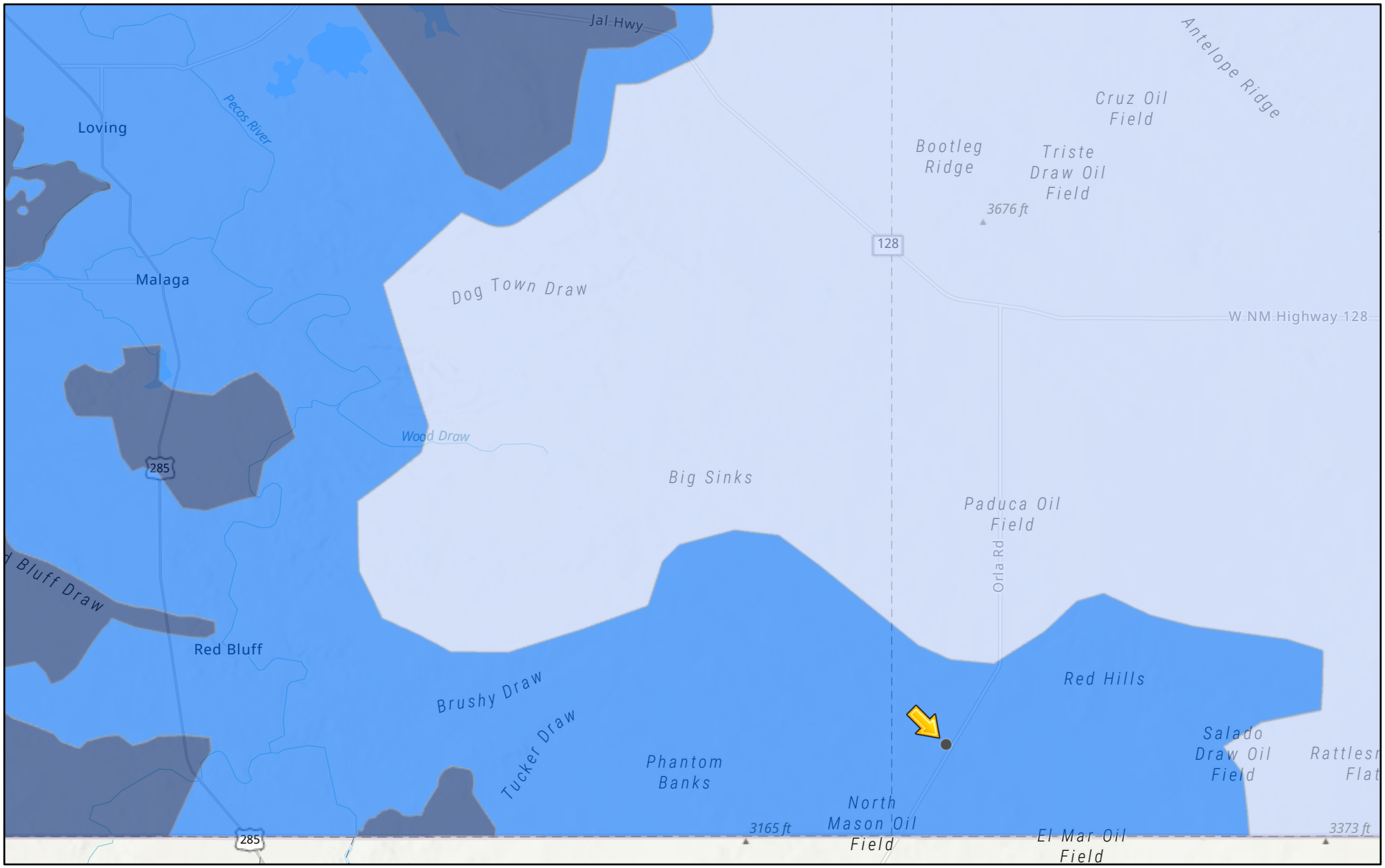
0 0.4 0.8 1.6 km

Esri, HERE, Garmin, Maxar, NM OSE

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

BUCK FEDERAL OCD KARST POTENTIAL MAP



10/4/2022, 3:05:13 PM

Override 1

Karst Occurrence Potential

High

Medium

Low

1:288,895

0 2 4 8 mi

0 3.25 6.5 13 km

BLM, OCD, New Mexico Tech, Esri, NASA, NGA, USGS, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS,

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 03537 POD1		CUB	LE	3	2	3	21	26S	32E	624250	3543985	1800	850		
C 02271 POD2		CUB	LE	3	2	3	21	26S	32E	624348	3544010*	1848	270	250	20
C 02323		C	LE	3	2	3	21	26S	32E	624348	3544010*	1848	405	405	0
C 02271	R	CUB	LE		2	3	21	26S	32E	624449	3544111*	1851	150	125	25
C 03595 POD1		CUB	LE	4	2	3	21	26S	32E	624423	3544045	1876	280	180	100

Average Depth to Water: **240 feet**

Minimum Depth: **125 feet**

Maximum Depth: **405 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 623062.793 **Northing (Y):** 3545338.506 **Radius:** 2000

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

212C-MD-02589 | TETRA TECH | **LOG OF BORING DTW** | Page 1 of 1

Project Name: Buck Federal CTB Release

Borehole Location: GPS Coordinates: 32.037733°, -103.695950° | Surface Elevation: 3171 ft

Borehole Number: DTW | Borehole Diameter (in.): 8 | Date Started: 9/27/2022 | Date Finished: 9/27/2022

WATER LEVEL OBSERVATIONS

While Drilling ▽ DRY ft Upon Completion of Drilling ▼ DRY ft

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
0												**-SM-** SILTY SAND: Light brown, coarse-grained, loose, with occasional caliche, dry.	1.5	
												-SM- SILTY SAND: Tan, coarse to fine-grained, dense, with abundant caliche, dry.	3	
5												**-SP-** SAND: Tan, fine-grained, dense, with moderate caliche, dry.	4	
												-SP- SAND: Tan, fine to very fine-grained, dense, with trace caliche, dry.		
10														
15													14	
												-SP- SANDSTONE: Reddish brown, cemented, dry.		
20														
25														
30														
35														
40														
45														
50														
55													55	

Bottom of borehole at 55.0 feet.

Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, Discrete Sample, Grab Sample, Test Pit

Operation Types: Hand Auger, Mud Rotary, Air Rotary, Continuous Flight Auger, Direct Push, Wash Rotary, Core Barrel

Notes: Surface elevation is an estimated value based on Google Earth data.

Logger: Colton Bickerstaff | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

APPENDIX C
Regulatory Correspondence

From: Hamlet, Robert, EMNRD
To: Esparza, Brittany
Cc: Beauvais, Charles R; Gonzalez, Jessika L; Fejervary Morena, Gustavo A; Bratcher, Mike, EMNRD; Hensley, Chad, EMNRD; Velez, Nelson, EMNRD
Subject: (Extension Approval) Buck Federal CTB (NAPP2128035834) 09-24-2021
Date: Tuesday, January 4, 2022 10:52:00 AM

RE: Incident #**NAPP2128035834**

Brittany,

Your request for an extension to **March 30th, 2022** is approved.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Esparza, Brittany <Brittany.Esparza@conocophillips.com>
Sent: Thursday, December 30, 2021 11:37 AM
To: EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; CFO_Spill, BLM_NM <BLM_NM_CFO_Spill@blm.gov>
Cc: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>; Gonzalez, Jessika L <Jessika.L.Gonzalez@conocophillips.com>; Esparza, Brittany <Brittany.Esparza@conocophillips.com>; Fejervary Morena, Gustavo A <G.Fejervary@conocophillips.com>
Subject: [EXTERNAL] (Extension Request #1) Buck Federal CTB (NAPP2128035834) 09-24-2021

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

To Whom it May Concern,

Under the new spill rule a Work Plan or Closure Report is due for the above release on December 30, 2021. ConocoPhillips is requesting a three-month extension until March 30, 2022 in order to assess this release.

Please let me know if you have any questions or concerns.

Thank you,

Brittany N. Esparza
Brittany N. Esparza | **Environmental Technician, Permian** | **ConocoPhillips**
O: 432-221-0398 | **C**: 432-349-1911 | 3CC-2064 Midland, Texas

APPENDIX D
Laboratory Analytical Reports

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-17275-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Buck Federal CTB

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:
7/30/2022 5:37:56 PM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.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: Buck Federal CTB

Laboratory Job ID: 880-17275-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Tetra Tech, Inc. Job ID: 880-17275-1
Project/Site: Buck Federal CTB SDG: Lea County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
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.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Job ID: 880-17275-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-17275-1

Receipt
The samples were received on 7/22/2022 12:53 PM. 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 time was 5.8°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-30680 and analytical batch 880-30750 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-30680 and analytical batch 880-30750 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-17267-A-1-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-2618-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: T-1 (0'-1') (880-17275-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: T-3 (0'-1') (880-17275-3) and T-4 (0'-1') (880-17275-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30666 and analytical batch 880-30643 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Client Sample ID: T-1 (0'-1')

Lab Sample ID: 880-17275-1
Matrix: Solid
Date Collected: 07/20/22 14:00
Date Received: 07/22/22 12:53

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		07/26/22 11:07	07/27/22 18:46	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/26/22 11:07	07/27/22 18:46	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/26/22 11:07	07/27/22 18:46	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/26/22 11:07	07/27/22 18:46	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/26/22 11:07	07/27/22 18:46	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/26/22 11:07	07/27/22 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/26/22 11:07*	*07/27/22 18:46*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*07/26/22 11:07*	*07/27/22 18:46*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/28/22 10:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 01:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 01:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 01:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*72*		*70 - 130*	*07/26/22 10:41*	*07/27/22 01:29*	*1*
o-Terphenyl	*69*	*S1-*	*70 - 130*	*07/26/22 10:41*	*07/27/22 01:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**93.6**		4.97		mg/Kg			07/29/22 14:00	1

Client Sample ID: T-2 (0'-1')

Lab Sample ID: 880-17275-2
Matrix: Solid
Date Collected: 07/20/22 14:10
Date Received: 07/22/22 12:53

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		07/26/22 11:07	07/27/22 19:12	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/26/22 11:07	07/27/22 19:12	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/26/22 11:07	07/27/22 19:12	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/26/22 11:07	07/27/22 19:12	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/26/22 11:07	07/27/22 19:12	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/26/22 11:07	07/27/22 19:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/26/22 11:07*	*07/27/22 19:12*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*07/26/22 11:07*	*07/27/22 19:12*	*1*

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Client Sample ID: T-2 (0'-1')

Lab Sample ID: 880-17275-2
Matrix: Solid
Date Collected: 07/20/22 14:10
Date Received: 07/22/22 12:53

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/28/22 10:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 02:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/22 10:41	07/27/22 02:12	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/22 10:41	07/27/22 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*07/26/22 10:41*	*07/27/22 02:12*	*1*
o-Terphenyl	*78*		*70 - 130*	*07/26/22 10:41*	*07/27/22 02:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**60.8**		4.97		mg/Kg			07/29/22 14:09	1

Client Sample ID: T-3 (0'-1')

Lab Sample ID: 880-17275-3
Matrix: Solid
Date Collected: 07/20/22 14:20
Date Received: 07/22/22 12:53

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		07/26/22 11:07	07/27/22 19:38	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/26/22 11:07	07/27/22 19:38	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/26/22 11:07	07/27/22 19:38	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/26/22 11:07	07/27/22 19:38	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/26/22 11:07	07/27/22 19:38	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/26/22 11:07	07/27/22 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*07/26/22 11:07*	*07/27/22 19:38*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*07/26/22 11:07*	*07/27/22 19:38*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			07/28/22 10:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 02:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 02:34	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Client Sample ID: T-3 (0'-1')

Date Collected: 07/20/22 14:20
Date Received: 07/22/22 12:53

Lab Sample ID: 880-17275-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 02:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*70*		*70 - 130*	*07/26/22 10:41*	*07/27/22 02:34*	*1*
o-Terphenyl	*65*	*S1-*	*70 - 130*	*07/26/22 10:41*	*07/27/22 02:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1500**		24.9		mg/Kg			07/29/22 14:18	5

Client Sample ID: T-4 (0'-1')

Date Collected: 07/20/22 14:30
Date Received: 07/22/22 12:53

Lab Sample ID: 880-17275-4
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		07/26/22 11:07	07/27/22 20:05	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/26/22 11:07	07/27/22 20:05	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/26/22 11:07	07/27/22 20:05	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/26/22 11:07	07/27/22 20:05	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/26/22 11:07	07/27/22 20:05	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/26/22 11:07	07/27/22 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*07/26/22 11:07*	*07/27/22 20:05*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*07/26/22 11:07*	*07/27/22 20:05*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/28/22 10:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**80.6**		50.0		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 02:55	1
Diesel Range Organics (Over C10-C28)	**80.6**		50.0		mg/Kg		07/26/22 10:41	07/27/22 02:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 02:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*67*	*S1-*	*70 - 130*	*07/26/22 10:41*	*07/27/22 02:55*	*1*
o-Terphenyl	*65*	*S1-*	*70 - 130*	*07/26/22 10:41*	*07/27/22 02:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**500**		5.04		mg/Kg			07/29/22 14:27	1

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-17267-A-1-D MS	Matrix Spike	83	123
880-17267-A-1-E MSD	Matrix Spike Duplicate	88	123
880-17275-1	T-1 (0'-1')	100	111
880-17275-2	T-2 (0'-1')	90	105
880-17275-3	T-3 (0'-1')	102	109
880-17275-4	T-4 (0'-1')	86	103
LCS 880-30680/1-A	Lab Control Sample	106	119
LCSD 880-30680/2-A	Lab Control Sample Dup	111	106
MB 880-30680/5-A	Method Blank	79	66 S1-

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)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-17275-1	T-1 (0'-1')	72	69 S1-
880-17275-2	T-2 (0'-1')	80	78
880-17275-3	T-3 (0'-1')	70	65 S1-
880-17275-4	T-4 (0'-1')	67 S1-	65 S1-
890-2618-A-1-E MS	Matrix Spike	82	78
890-2618-A-1-F MSD	Matrix Spike Duplicate	67 S1-	64 S1-
LCS 880-30666/2-A	Lab Control Sample	90	92
LCSD 880-30666/3-A	Lab Control Sample Dup	93	95
MB 880-30666/1-A	Method Blank	100	108

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30680/5-A
Matrix: Solid
Analysis Batch: 30750

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30680

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/22 11:07	07/27/22 17:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/22 11:07	07/27/22 17:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/22 11:07	07/27/22 17:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/26/22 11:07	07/27/22 17:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/22 11:07	07/27/22 17:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/26/22 11:07	07/27/22 17:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*07/26/22 11:07*	*07/27/22 17:26*	*1*
1,4-Difluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*07/26/22 11:07*	*07/27/22 17:26*	*1*

Lab Sample ID: LCS 880-30680/1-A
Matrix: Solid
Analysis Batch: 30750

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30680

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1169		mg/Kg		117	70 - 130
Toluene	0.100	0.1028		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.1066		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	0.200	0.2146		mg/Kg		107	70 - 130
o-Xylene	0.100	0.1242		mg/Kg		124	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*

Lab Sample ID: LCSD 880-30680/2-A
Matrix: Solid
Analysis Batch: 30750

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30680

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1097		mg/Kg		110	70 - 130	6	35
Toluene	0.100	0.09966		mg/Kg		100	70 - 130	3	35
Ethylbenzene	0.100	0.09893		mg/Kg		99	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.2001		mg/Kg		100	70 - 130	7	35
o-Xylene	0.100	0.1182		mg/Kg		118	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-17267-A-1-D MS
Matrix: Solid
Analysis Batch: 30750

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1	0.100	0.05985	F1	mg/Kg		60	70 - 130
Toluene	<0.00200	U F1	0.100	0.05056	F1	mg/Kg		50	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

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

Lab Sample ID: 880-17267-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30750 — **Prep Batch: 30680**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F1	0.100	0.07715		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1	0.201	0.09728	F1	mg/Kg		48	70 - 130
o-Xylene	<0.00200	U F1	0.100	0.06064	F1	mg/Kg		60	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: 880-17267-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30750 — **Prep Batch: 30680**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0996	0.06769	F1	mg/Kg		68	70 - 130	12	35
Toluene	<0.00200	U F1	0.0996	0.06304	F1	mg/Kg		63	70 - 130	22	35
Ethylbenzene	<0.00200	U F1	0.0996	0.06338	F1	mg/Kg		64	70 - 130	20	35
m-Xylene & p-Xylene	<0.00401	U F1	0.199	0.1259	F1	mg/Kg		63	70 - 130	26	35
o-Xylene	<0.00200	U F1	0.0996	0.07359		mg/Kg		74	70 - 130	19	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

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

Lab Sample ID: MB 880-30666/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30643 — **Prep Batch: 30666**

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		07/26/22 10:41	07/26/22 20:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/26/22 20:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/26/22 20:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*07/26/22 10:41*	*07/26/22 20:25*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/26/22 10:41*	*07/26/22 20:25*	*1*

Lab Sample ID: LCS 880-30666/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 30643 — **Prep Batch: 30666**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1067		mg/Kg		107	70 - 130
Diesel Range Organics (Over C10-C28)	1000	914.2		mg/Kg		91	70 - 130

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-30666/2-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30666

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: LCSD 880-30666/3-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30666

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1056		mg/Kg		106	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	902.3		mg/Kg		90	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 890-2618-A-1-E MS
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30666

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 F2	1000	1169		mg/Kg		114	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	853.5		mg/Kg		84	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	78		70 - 130

Lab Sample ID: 890-2618-A-1-F MSD
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30666

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 F2	999	943.2	F2	mg/Kg		92	70 - 130	21	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	704.6	F1	mg/Kg		69	70 - 130	19	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	67	S1-	70 - 130
o-Terphenyl	64	S1-	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30602/1-A
Matrix: Solid
Analysis Batch: 30920

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			07/29/22 10:35	1

Lab Sample ID: LCS 880-30602/2-A
Matrix: Solid
Analysis Batch: 30920

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	261.1		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-30602/3-A
Matrix: Solid
Analysis Batch: 30920

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	261.9		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 880-17266-A-41-B MS
Matrix: Solid
Analysis Batch: 30920

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	1680	F1	1250	3104	F1	mg/Kg		114	90 - 110		

Lab Sample ID: 880-17266-A-41-C MSD
Matrix: Solid
Analysis Batch: 30920

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	1680	F1	1250	2993		mg/Kg		105	90 - 110	4	20

Lab Sample ID: 880-17282-A-1-E MS
Matrix: Solid
Analysis Batch: 30920

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	3090		1250	4253		mg/Kg		93	90 - 110		

Lab Sample ID: 880-17282-A-1-F MSD
Matrix: Solid
Analysis Batch: 30920

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	3090		1250	4249		mg/Kg		93	90 - 110	0	20

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

GC VOA

Prep Batch: 30680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17275-1	T-1 (0'-1')	Total/NA	Solid	5035	
880-17275-2	T-2 (0'-1')	Total/NA	Solid	5035	
880-17275-3	T-3 (0'-1')	Total/NA	Solid	5035	
880-17275-4	T-4 (0'-1')	Total/NA	Solid	5035	
MB 880-30680/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30680/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30680/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17267-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-17267-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 30750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17275-1	T-1 (0'-1')	Total/NA	Solid	8021B	30680
880-17275-2	T-2 (0'-1')	Total/NA	Solid	8021B	30680
880-17275-3	T-3 (0'-1')	Total/NA	Solid	8021B	30680
880-17275-4	T-4 (0'-1')	Total/NA	Solid	8021B	30680
MB 880-30680/5-A	Method Blank	Total/NA	Solid	8021B	30680
LCS 880-30680/1-A	Lab Control Sample	Total/NA	Solid	8021B	30680
LCSD 880-30680/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30680
880-17267-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	30680
880-17267-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30680

Analysis Batch: 30906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17275-1	T-1 (0'-1')	Total/NA	Solid	Total BTEX	
880-17275-2	T-2 (0'-1')	Total/NA	Solid	Total BTEX	
880-17275-3	T-3 (0'-1')	Total/NA	Solid	Total BTEX	
880-17275-4	T-4 (0'-1')	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 30643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17275-1	T-1 (0'-1')	Total/NA	Solid	8015B NM	30666
880-17275-2	T-2 (0'-1')	Total/NA	Solid	8015B NM	30666
880-17275-3	T-3 (0'-1')	Total/NA	Solid	8015B NM	30666
880-17275-4	T-4 (0'-1')	Total/NA	Solid	8015B NM	30666
MB 880-30666/1-A	Method Blank	Total/NA	Solid	8015B NM	30666
LCS 880-30666/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30666
LCSD 880-30666/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30666
890-2618-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30666
890-2618-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30666

Prep Batch: 30666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17275-1	T-1 (0'-1')	Total/NA	Solid	8015NM Prep	
880-17275-2	T-2 (0'-1')	Total/NA	Solid	8015NM Prep	
880-17275-3	T-3 (0'-1')	Total/NA	Solid	8015NM Prep	
880-17275-4	T-4 (0'-1')	Total/NA	Solid	8015NM Prep	
MB 880-30666/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30666/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

GC Semi VOA (Continued)

Prep Batch: 30666 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-30666/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2618-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2618-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17275-1	T-1 (0'-1')	Total/NA	Solid	8015 NM	
880-17275-2	T-2 (0'-1')	Total/NA	Solid	8015 NM	
880-17275-3	T-3 (0'-1')	Total/NA	Solid	8015 NM	
880-17275-4	T-4 (0'-1')	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17275-1	T-1 (0'-1')	Soluble	Solid	DI Leach	
880-17275-2	T-2 (0'-1')	Soluble	Solid	DI Leach	
880-17275-3	T-3 (0'-1')	Soluble	Solid	DI Leach	
880-17275-4	T-4 (0'-1')	Soluble	Solid	DI Leach	
MB 880-30602/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30602/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-30602/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17266-A-41-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17266-A-41-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-17282-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17282-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17275-1	T-1 (0'-1')	Soluble	Solid	300.0	30602
880-17275-2	T-2 (0'-1')	Soluble	Solid	300.0	30602
880-17275-3	T-3 (0'-1')	Soluble	Solid	300.0	30602
880-17275-4	T-4 (0'-1')	Soluble	Solid	300.0	30602
MB 880-30602/1-A	Method Blank	Soluble	Solid	300.0	30602
LCS 880-30602/2-A	Lab Control Sample	Soluble	Solid	300.0	30602
LCSD 880-30602/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30602
880-17266-A-41-B MS	Matrix Spike	Soluble	Solid	300.0	30602
880-17266-A-41-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30602
880-17282-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	30602
880-17282-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30602

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Client Sample ID: T-1 (0'-1')

Lab Sample ID: 880-17275-1
Matrix: Solid
Date Collected: 07/20/22 14:00
Date Received: 07/22/22 12:53

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	30680	07/26/22 11:07	MR	XEN MID
Total/NA	Analysis	8021B		1			30750	07/27/22 18:46	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30906	07/28/22 10:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30804	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 01:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	30602	07/25/22 15:34	KS	XEN MID
Soluble	Analysis	300.0		1			30920	07/29/22 14:00	SMC	XEN MID

Client Sample ID: T-2 (0'-1')

Lab Sample ID: 880-17275-2
Matrix: Solid
Date Collected: 07/20/22 14:10
Date Received: 07/22/22 12:53

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	30680	07/26/22 11:07	MR	XEN MID
Total/NA	Analysis	8021B		1			30750	07/27/22 19:12	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30906	07/28/22 10:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30804	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 02:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	30602	07/25/22 15:34	KS	XEN MID
Soluble	Analysis	300.0		1			30920	07/29/22 14:09	SMC	XEN MID

Client Sample ID: T-3 (0'-1')

Lab Sample ID: 880-17275-3
Matrix: Solid
Date Collected: 07/20/22 14:20
Date Received: 07/22/22 12:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	30680	07/26/22 11:07	MR	XEN MID
Total/NA	Analysis	8021B		1			30750	07/27/22 19:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30906	07/28/22 10:37	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30804	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 02:34	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	30602	07/25/22 15:34	KS	XEN MID
Soluble	Analysis	300.0		5			30920	07/29/22 14:18	SMC	XEN MID

Client Sample ID: T-4 (0'-1')

Lab Sample ID: 880-17275-4
Matrix: Solid
Date Collected: 07/20/22 14:30
Date Received: 07/22/22 12:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	30680	07/26/22 11:07	MR	XEN MID
Total/NA	Analysis	8021B		1			30750	07/27/22 20:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			30906	07/28/22 10:37	SM	XEN MID

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Client Sample ID: T-4 (0'-1')

Date Collected: 07/20/22 14:30
Date Received: 07/22/22 12:53

Lab Sample ID: 880-17275-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			30804	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 02:55	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	30602	07/25/22 15:34	KS	XEN MID
Soluble	Analysis	300.0		1			30920	07/29/22 14:27	SMC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Tetra Tech, Inc. Job ID: 880-17275-1
Project/Site: Buck Federal CTB SDG: Lea County NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (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.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17275-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-17275-1	T-1 (0'-1')	Solid	07/20/22 14:00	07/22/22 12:53
880-17275-2	T-2 (0'-1')	Solid	07/20/22 14:10	07/22/22 12:53
880-17275-3	T-3 (0'-1')	Solid	07/20/22 14:20	07/22/22 12:53
880-17275-4	T-4 (0'-1')	Solid	07/20/22 14:30	07/22/22 12:53

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Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300
Midland TX (432) 704-5440 San Antonio TX (210) 509-3334
EL Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199

Work Order No: 17275

www.xenco.com Page _____ of _____

Project Manager	Christian Ull	Bill to (if different)	Christian Ull
Company Name	Tetra Tech	Company Name	
Address		Address	
City, State ZIP		City, State ZIP	
Phone	(512) 338-1667	Email	christian.ull@tetratech.com

Work Order Comments

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

Project Name	Buck Federal CTB	Turn Around	
Project Number	21AC-MD-02589	☒ Routine ☐ Rush	
Project Location	Lea County, NM	Due Date	
Sampler's Name	Joe Tyler	TAT starts the day received by the lab if received by 4 30pm	
PO #			

SAMPLE RECEIPT				
Temp Blank.	Yes (No)	Wet Ice	(Yes) No	
Samples Received Intact.	(Yes) No	Thermometer ID	IR8	
Cooler Custody Seals	Yes No (N/A)	Correction Factor	+20	
Sample Custody Seals	Yes No (N/A)	Temperature Reading	5.6	
Total Containers		Corrected Temperature	5.8	

ANALYSIS REQUEST

Preservative Codes

None NO DI Water H_2O
Cool Cool MeOH Me
HCL HC HNO_3 HN
H_2SO_4 H_2 NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: BTEX	TPH 8015	Chlorides	Sample Comments
T-1 (0-1')	Soil	7-20	1400	-	G	1	X	X	X	
T-2 (0-1')	Soil	7-20	1410	-	G	1	X	X	X	
T-3 (0-1')	Soil	7-20	1420	-	G	1	X	X	X	
T-4 (0-1')	Soil	7-20	1430	-	G	1	X	X	X	

880-17275 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg 1631 / 245 1 / 7470 / 7471

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1			2		
3		7/29/2022 12:53	4		
5			6		

17275

Revised Date: 08/25/2020 Rev: 2020.2

Loc: 880
17275

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 880-17275-1
SDG Number: Lea County NM

Login Number: 17275
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins 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	

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ANALYTICAL REPORT

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

Laboratory Job ID: 880-17276-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Buck Federal CTB

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:
8/1/2022 9:59:15 AM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.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: Buck Federal CTB

Laboratory Job ID: 880-17276-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Tetra Tech, Inc. Job ID: 880-17276-1
Project/Site: Buck Federal CTB SDG: Lea County NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
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.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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. Job ID: 880-17276-1
Project/Site: Buck Federal CTB SDG: Lea County NM

Job ID: 880-17276-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-17276-1

Receipt
The samples were received on 7/22/2022 12:53 PM. 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 time was 5.8°C

GC VOA
Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-30706 and analytical batch 880-31095 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-30706 and analytical batch 880-31095 were outside control limits. Non-homogeneity is 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.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-2618-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: AH-3 (1'-2') (880-17276-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30666 and analytical batch 880-30643 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-30600 and analytical batch 880-30692 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Client Sample ID: AH-1 (0'-1')

Date Collected: 07/20/22 13:20
Date Received: 07/22/22 12:53

Lab Sample ID: 880-17276-1
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		07/31/22 10:09	07/31/22 15:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 15:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 15:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/31/22 10:09	07/31/22 15:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 15:37	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/31/22 10:09	07/31/22 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/31/22 10:09*	*07/31/22 15:37*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*07/31/22 10:09*	*07/31/22 15:37*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			08/01/22 10:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 03:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/22 10:41	07/27/22 03:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/22 10:41	07/27/22 03:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*07/26/22 10:41*	*07/27/22 03:17*	*1*
o-Terphenyl	*94*		*70 - 130*	*07/26/22 10:41*	*07/27/22 03:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.5**		4.95		mg/Kg			07/26/22 23:27	1

Client Sample ID: AH-1 (1'-2')

Date Collected: 07/20/22 13:40
Date Received: 07/22/22 12:53

Lab Sample ID: 880-17276-2
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		07/31/22 10:09	07/31/22 15:58	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/31/22 10:09	07/31/22 15:58	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/31/22 10:09	07/31/22 15:58	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/31/22 10:09	07/31/22 15:58	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/31/22 10:09	07/31/22 15:58	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/31/22 10:09	07/31/22 15:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/31/22 10:09*	*07/31/22 15:58*	*1*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*	*07/31/22 10:09*	*07/31/22 15:58*	*1*

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Client Sample ID: AH-1 (1'-2')

Lab Sample ID: 880-17276-2
Matrix: Solid
Date Collected: 07/20/22 13:40
Date Received: 07/22/22 12:53

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			08/01/22 10:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 03:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/22 10:41	07/27/22 03:38	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/22 10:41	07/27/22 03:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*07/26/22 10:41*	*07/27/22 03:38*	*1*
o-Terphenyl	*82*		*70 - 130*	*07/26/22 10:41*	*07/27/22 03:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.7**		4.99		mg/Kg			07/26/22 23:36	1

Client Sample ID: AH-2 (0'-1')

Lab Sample ID: 880-17276-3
Matrix: Solid
Date Collected: 07/20/22 11:00
Date Received: 07/22/22 12:53

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		07/31/22 10:09	07/31/22 16:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/31/22 10:09	07/31/22 16:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/31/22 10:09	07/31/22 16:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/31/22 10:09	07/31/22 16:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/31/22 10:09	07/31/22 16:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/31/22 10:09	07/31/22 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/31/22 10:09*	*07/31/22 16:19*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*07/31/22 10:09*	*07/31/22 16:19*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			08/01/22 10:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 04:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 04:00	1

Eurofins Midland

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Client Sample ID: AH-2 (0'-1')

Lab Sample ID: 880-17276-3
Matrix: Solid
Date Collected: 07/20/22 11:00
Date Received: 07/22/22 12:53

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 04:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*07/26/22 10:41*	*07/27/22 04:00*	*1*
o-Terphenyl	*81*		*70 - 130*	*07/26/22 10:41*	*07/27/22 04:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38.6**		5.01		mg/Kg			07/26/22 23:45	1

Client Sample ID: AH-2 (2'-3')

Lab Sample ID: 880-17276-4
Matrix: Solid
Date Collected: 07/20/22 11:20
Date Received: 07/22/22 12:53

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		07/31/22 10:09	07/31/22 16:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 16:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 16:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/31/22 10:09	07/31/22 16:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 16:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/31/22 10:09	07/31/22 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/31/22 10:09*	*07/31/22 16:39*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*07/31/22 10:09*	*07/31/22 16:39*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			08/01/22 10:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 04:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/26/22 10:41	07/27/22 04:21	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/26/22 10:41	07/27/22 04:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*07/26/22 10:41*	*07/27/22 04:21*	*1*
o-Terphenyl	*83*		*70 - 130*	*07/26/22 10:41*	*07/27/22 04:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**81.0**		5.02		mg/Kg			07/26/22 23:54	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Client Sample ID: AH-2 (4'-5')

Lab Sample ID: 880-17276-5
Matrix: Solid
Date Collected: 07/20/22 11:40
Date Received: 07/22/22 12:53

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		07/31/22 10:09	07/31/22 17:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 17:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 17:00	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/31/22 10:09	07/31/22 17:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 17:00	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/31/22 10:09	07/31/22 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/31/22 10:09*	*07/31/22 17:00*	*1*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*	*07/31/22 10:09*	*07/31/22 17:00*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			08/01/22 10:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 04:43	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/26/22 10:41	07/27/22 04:43	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/26/22 10:41	07/27/22 04:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*07/26/22 10:41*	*07/27/22 04:43*	*1*
o-Terphenyl	*107*		*70 - 130*	*07/26/22 10:41*	*07/27/22 04:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1930**		25.0		mg/Kg			07/27/22 00:22	5

Client Sample ID: AH-3 (0'-1')

Lab Sample ID: 880-17276-6
Matrix: Solid
Date Collected: 07/20/22 12:00
Date Received: 07/22/22 12:53

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		07/31/22 10:09	07/31/22 17:21	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/31/22 10:09	07/31/22 17:21	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/31/22 10:09	07/31/22 17:21	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/31/22 10:09	07/31/22 17:21	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/31/22 10:09	07/31/22 17:21	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/31/22 10:09	07/31/22 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/31/22 10:09*	*07/31/22 17:21*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*07/31/22 10:09*	*07/31/22 17:21*	*1*

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Client Sample ID: AH-3 (0'-1')

Lab Sample ID: 880-17276-6
Matrix: Solid
Date Collected: 07/20/22 12:00
Date Received: 07/22/22 12:53

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			08/01/22 10:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 05:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 05:04	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 05:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*07/26/22 10:41*	*07/27/22 05:04*	*1*
o-Terphenyl	*81*		*70 - 130*	*07/26/22 10:41*	*07/27/22 05:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**35.7**		5.00		mg/Kg			07/27/22 00:31	1

Client Sample ID: AH-3 (1'-2')

Lab Sample ID: 880-17276-7
Matrix: Solid
Date Collected: 07/20/22 12:20
Date Received: 07/22/22 12:53

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		07/31/22 10:09	07/31/22 18:46	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/31/22 10:09	07/31/22 18:46	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/31/22 10:09	07/31/22 18:46	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/31/22 10:09	07/31/22 18:46	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/31/22 10:09	07/31/22 18:46	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/31/22 10:09	07/31/22 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/31/22 10:09*	*07/31/22 18:46*	*1*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*	*07/31/22 10:09*	*07/31/22 18:46*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			08/01/22 10:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			07/27/22 10:58	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		07/26/22 10:41	07/27/22 05:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 05:26	1

Eurofins Midland

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Client Sample ID: AH-3 (1'-2')

Date Collected: 07/20/22 12:20
Date Received: 07/22/22 12:53

Lab Sample ID: 880-17276-7

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/27/22 05:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*68*	*S1-*	*70 - 130*	*07/26/22 10:41*	*07/27/22 05:26*	*1*
o-Terphenyl	*72*		*70 - 130*	*07/26/22 10:41*	*07/27/22 05:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1150**		25.0		mg/Kg			07/27/22 00:40	5

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-17204-A-159-C MS	Matrix Spike	97	104
880-17204-A-159-D MSD	Matrix Spike Duplicate	108	111
880-17255-A-1-L MS	Matrix Spike	104	106
880-17255-A-1-M MSD	Matrix Spike Duplicate	85	114
880-17276-1	AH-1 (0'-1')	90	116
880-17276-2	AH-1 (1'-2')	92	122
880-17276-3	AH-2 (0'-1')	98	118
880-17276-4	AH-2 (2'-3')	96	114
880-17276-5	AH-2 (4'-5')	98	119
880-17276-6	AH-3 (0'-1')	101	115
880-17276-7	AH-3 (1'-2')	88	116
LCS 880-30706/1-A	Lab Control Sample	84	115
LCS 880-31099/1-A	Lab Control Sample	81	110
LCSD 880-30706/2-A	Lab Control Sample Dup	84	113
LCSD 880-31099/2-A	Lab Control Sample Dup	81	112
MB 880-30706/5-A	Method Blank	84	108
MB 880-31099/5-A	Method Blank	84	105

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)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-17276-1	AH-1 (0'-1')	88	94
880-17276-2	AH-1 (1'-2')	75	82
880-17276-3	AH-2 (0'-1')	74	81
880-17276-4	AH-2 (2'-3')	76	83
880-17276-5	AH-2 (4'-5')	101	107
880-17276-6	AH-3 (0'-1')	74	81
880-17276-7	AH-3 (1'-2')	68 S1-	72
890-2618-A-1-E MS	Matrix Spike	82	78
890-2618-A-1-F MSD	Matrix Spike Duplicate	67 S1-	64 S1-
LCS 880-30666/2-A	Lab Control Sample	90	92
LCSD 880-30666/3-A	Lab Control Sample Dup	93	95
MB 880-30666/1-A	Method Blank	100	108

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-30706/5-A
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/26/22 13:56	07/31/22 22:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/26/22 13:56	07/31/22 22:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/26/22 13:56	07/31/22 22:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/26/22 13:56	07/31/22 22:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/26/22 13:56	07/31/22 22:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/26/22 13:56	07/31/22 22:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*07/26/22 13:56*	*07/31/22 22:33*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*07/26/22 13:56*	*07/31/22 22:33*	*1*

Lab Sample ID: LCS 880-30706/1-A
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30706

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1251		mg/Kg		125	70 - 130		
Toluene			0.100	0.09930		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09326		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1793		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.08936		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: LCSD 880-30706/2-A
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30706

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1323	*+	mg/Kg		132	70 - 130	6	35
Toluene			0.100	0.1056		mg/Kg		106	70 - 130	6	35
Ethylbenzene			0.100	0.09886		mg/Kg		99	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1909		mg/Kg		95	70 - 130	6	35
o-Xylene			0.100	0.09503		mg/Kg		95	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-17204-A-159-C MS
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U *+	0.0998	0.08193		mg/Kg		82	70 - 130		
Toluene	<0.00199	U	0.0998	0.08115		mg/Kg		81	70 - 130		

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

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

Lab Sample ID: 880-17204-A-159-C MS
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.0998	0.06858	F1	mg/Kg		69	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1356	F1	mg/Kg		68	70 - 130
o-Xylene	<0.00199	U F1	0.0998	0.06667	F1	mg/Kg		67	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-17204-A-159-D MSD
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30706

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U *+	0.100	0.09561		mg/Kg		95	70 - 130	15	35
Toluene	<0.00199	U	0.100	0.09728		mg/Kg		97	70 - 130	18	35
Ethylbenzene	<0.00199	U F1	0.100	0.08229		mg/Kg		82	70 - 130	18	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1654		mg/Kg		83	70 - 130	20	35
o-Xylene	<0.00199	U F1	0.100	0.08177		mg/Kg		82	70 - 130	20	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: MB 880-31099/5-A
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 31099

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 13:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 13:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 13:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/31/22 10:09	07/31/22 13:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/31/22 10:09	07/31/22 13:52	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/31/22 10:09	07/31/22 13:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*07/31/22 10:09*	*07/31/22 13:52*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*07/31/22 10:09*	*07/31/22 13:52*	*1*

Lab Sample ID: LCS 880-31099/1-A
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31099

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1175		mg/Kg		118	70 - 130
Toluene	0.100	0.09893		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.09461		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	0.200	0.1853		mg/Kg		93	70 - 130

Eurofins Midland

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

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

Lab Sample ID: LCS 880-31099/1-A
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 31099

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.09017		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-31099/2-A
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 31099

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1218		mg/Kg		122	70 - 130	4	35
Toluene			0.100	0.1000		mg/Kg		100	70 - 130	1	35
Ethylbenzene			0.100	0.09564		mg/Kg		96	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1862		mg/Kg		93	70 - 130	0	35
o-Xylene			0.100	0.09056		mg/Kg		91	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-17255-A-1-L MS
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 31099

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U *+	0.101	0.09331		mg/Kg		92	70 - 130		
Toluene	<0.00199	U	0.101	0.1029		mg/Kg		102	70 - 130		
Ethylbenzene	<0.00199	U	0.101	0.1105		mg/Kg		110	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.201	0.2305		mg/Kg		115	70 - 130		
o-Xylene	<0.00199	U	0.101	0.1135		mg/Kg		113	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-17255-A-1-M MSD
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31099

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U *+	0.100	0.1191		mg/Kg		118	70 - 130	24	35
Toluene	<0.00199	U	0.100	0.09899		mg/Kg		99	70 - 130	4	35
Ethylbenzene	<0.00199	U	0.100	0.09428		mg/Kg		94	70 - 130	16	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1848		mg/Kg		92	70 - 130	22	35
o-Xylene	<0.00199	U	0.100	0.09075		mg/Kg		91	70 - 130	22	35

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

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

Lab Sample ID: 880-17255-A-1-M MSD
Matrix: Solid
Analysis Batch: 31095

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 31099

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	114		70 - 130

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

Lab Sample ID: MB 880-30666/1-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30666

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		07/26/22 10:41	07/26/22 20:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/26/22 20:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/26/22 10:41	07/26/22 20:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	07/26/22 10:41	07/26/22 20:25	1
o-Terphenyl	108		70 - 130	07/26/22 10:41	07/26/22 20:25	1

Lab Sample ID: LCS 880-30666/2-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30666

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1067		mg/Kg		107	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	914.2		mg/Kg		91	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: LCSD 880-30666/3-A
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 30666

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1056		mg/Kg		106	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	902.3		mg/Kg		90	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	95		70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

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

Lab Sample ID: 890-2618-A-1-E MS
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 30666

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 F2	1000	1169		mg/Kg		114	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	853.5		mg/Kg		84	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*78*		*70 - 130*

Lab Sample ID: 890-2618-A-1-F MSD
Matrix: Solid
Analysis Batch: 30643

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 30666

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 F2	999	943.2	F2	mg/Kg		92	70 - 130	21	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	704.6	F1	mg/Kg		69	70 - 130	19	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*67*	*S1-*	*70 - 130*
o-Terphenyl	*64*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-30600/1-A
Matrix: Solid
Analysis Batch: 30692

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			07/26/22 22:31	1

Lab Sample ID: LCS 880-30600/2-A
Matrix: Solid
Analysis Batch: 30692

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	254.9		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-30600/3-A
Matrix: Solid
Analysis Batch: 30692

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	255.8		mg/Kg		102	90 - 110	0	20

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-17271-A-1-B MS
Matrix: Solid
Analysis Batch: 30692

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	1150	F1	1250	3873	F1	mg/Kg		218	90 - 110

Lab Sample ID: 880-17271-A-1-C MSD
Matrix: Solid
Analysis Batch: 30692

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	1150	F1	1250	3879	F1	mg/Kg		219	90 - 110	0	20

Lab Sample ID: 880-17277-A-3-E MS
Matrix: Solid
Analysis Batch: 30692

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	22.5	F1	252	299.6		mg/Kg		110	90 - 110

Lab Sample ID: 880-17277-A-3-F MSD
Matrix: Solid
Analysis Batch: 30692

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	22.5	F1	252	302.1	F1	mg/Kg		111	90 - 110	1	20

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

GC VOA

Prep Batch: 30706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-30706/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-30706/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-30706/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17204-A-159-C MS	Matrix Spike	Total/NA	Solid	5035	
880-17204-A-159-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17276-1	AH-1 (0'-1')	Total/NA	Solid	8021B	31099
880-17276-2	AH-1 (1'-2')	Total/NA	Solid	8021B	31099
880-17276-3	AH-2 (0'-1')	Total/NA	Solid	8021B	31099
880-17276-4	AH-2 (2'-3')	Total/NA	Solid	8021B	31099
880-17276-5	AH-2 (4'-5')	Total/NA	Solid	8021B	31099
880-17276-6	AH-3 (0'-1')	Total/NA	Solid	8021B	31099
880-17276-7	AH-3 (1'-2')	Total/NA	Solid	8021B	31099
MB 880-30706/5-A	Method Blank	Total/NA	Solid	8021B	30706
MB 880-31099/5-A	Method Blank	Total/NA	Solid	8021B	31099
LCS 880-30706/1-A	Lab Control Sample	Total/NA	Solid	8021B	30706
LCS 880-31099/1-A	Lab Control Sample	Total/NA	Solid	8021B	31099
LCSD 880-30706/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	30706
LCSD 880-31099/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	31099
880-17204-A-159-C MS	Matrix Spike	Total/NA	Solid	8021B	30706
880-17204-A-159-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	30706
880-17255-A-1-L MS	Matrix Spike	Total/NA	Solid	8021B	31099
880-17255-A-1-M MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	31099

Prep Batch: 31099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17276-1	AH-1 (0'-1')	Total/NA	Solid	5035	
880-17276-2	AH-1 (1'-2')	Total/NA	Solid	5035	
880-17276-3	AH-2 (0'-1')	Total/NA	Solid	5035	
880-17276-4	AH-2 (2'-3')	Total/NA	Solid	5035	
880-17276-5	AH-2 (4'-5')	Total/NA	Solid	5035	
880-17276-6	AH-3 (0'-1')	Total/NA	Solid	5035	
880-17276-7	AH-3 (1'-2')	Total/NA	Solid	5035	
MB 880-31099/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-31099/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-31099/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-17255-A-1-L MS	Matrix Spike	Total/NA	Solid	5035	
880-17255-A-1-M MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 31182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17276-1	AH-1 (0'-1')	Total/NA	Solid	Total BTEX	
880-17276-2	AH-1 (1'-2')	Total/NA	Solid	Total BTEX	
880-17276-3	AH-2 (0'-1')	Total/NA	Solid	Total BTEX	
880-17276-4	AH-2 (2'-3')	Total/NA	Solid	Total BTEX	
880-17276-5	AH-2 (4'-5')	Total/NA	Solid	Total BTEX	
880-17276-6	AH-3 (0'-1')	Total/NA	Solid	Total BTEX	
880-17276-7	AH-3 (1'-2')	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

GC Semi VOA

Analysis Batch: 30643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17276-1	AH-1 (0'-1')	Total/NA	Solid	8015B NM	30666
880-17276-2	AH-1 (1'-2')	Total/NA	Solid	8015B NM	30666
880-17276-3	AH-2 (0'-1')	Total/NA	Solid	8015B NM	30666
880-17276-4	AH-2 (2'-3')	Total/NA	Solid	8015B NM	30666
880-17276-5	AH-2 (4'-5')	Total/NA	Solid	8015B NM	30666
880-17276-6	AH-3 (0'-1')	Total/NA	Solid	8015B NM	30666
880-17276-7	AH-3 (1'-2')	Total/NA	Solid	8015B NM	30666
MB 880-30666/1-A	Method Blank	Total/NA	Solid	8015B NM	30666
LCS 880-30666/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	30666
LCSD 880-30666/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	30666
890-2618-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	30666
890-2618-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	30666

Prep Batch: 30666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17276-1	AH-1 (0'-1')	Total/NA	Solid	8015NM Prep	
880-17276-2	AH-1 (1'-2')	Total/NA	Solid	8015NM Prep	
880-17276-3	AH-2 (0'-1')	Total/NA	Solid	8015NM Prep	
880-17276-4	AH-2 (2'-3')	Total/NA	Solid	8015NM Prep	
880-17276-5	AH-2 (4'-5')	Total/NA	Solid	8015NM Prep	
880-17276-6	AH-3 (0'-1')	Total/NA	Solid	8015NM Prep	
880-17276-7	AH-3 (1'-2')	Total/NA	Solid	8015NM Prep	
MB 880-30666/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-30666/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-30666/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2618-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2618-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 30805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17276-1	AH-1 (0'-1')	Total/NA	Solid	8015 NM	
880-17276-2	AH-1 (1'-2')	Total/NA	Solid	8015 NM	
880-17276-3	AH-2 (0'-1')	Total/NA	Solid	8015 NM	
880-17276-4	AH-2 (2'-3')	Total/NA	Solid	8015 NM	
880-17276-5	AH-2 (4'-5')	Total/NA	Solid	8015 NM	
880-17276-6	AH-3 (0'-1')	Total/NA	Solid	8015 NM	
880-17276-7	AH-3 (1'-2')	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 30600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17276-1	AH-1 (0'-1')	Soluble	Solid	DI Leach	
880-17276-2	AH-1 (1'-2')	Soluble	Solid	DI Leach	
880-17276-3	AH-2 (0'-1')	Soluble	Solid	DI Leach	
880-17276-4	AH-2 (2'-3')	Soluble	Solid	DI Leach	
880-17276-5	AH-2 (4'-5')	Soluble	Solid	DI Leach	
880-17276-6	AH-3 (0'-1')	Soluble	Solid	DI Leach	
880-17276-7	AH-3 (1'-2')	Soluble	Solid	DI Leach	
MB 880-30600/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-30600/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

HPLC/IC (Continued)

Leach Batch: 30600 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-30600/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-17271-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17271-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-17277-A-3-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-17277-A-3-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 30692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-17276-1	AH-1 (0'-1')	Soluble	Solid	300.0	30600
880-17276-2	AH-1 (1'-2')	Soluble	Solid	300.0	30600
880-17276-3	AH-2 (0'-1')	Soluble	Solid	300.0	30600
880-17276-4	AH-2 (2'-3')	Soluble	Solid	300.0	30600
880-17276-5	AH-2 (4'-5')	Soluble	Solid	300.0	30600
880-17276-6	AH-3 (0'-1')	Soluble	Solid	300.0	30600
880-17276-7	AH-3 (1'-2')	Soluble	Solid	300.0	30600
MB 880-30600/1-A	Method Blank	Soluble	Solid	300.0	30600
LCS 880-30600/2-A	Lab Control Sample	Soluble	Solid	300.0	30600
LCSD 880-30600/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	30600
880-17271-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	30600
880-17271-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30600
880-17277-A-3-E MS	Matrix Spike	Soluble	Solid	300.0	30600
880-17277-A-3-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	30600

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Client Sample ID: AH-1 (0'-1')

Lab Sample ID: 880-17276-1
Matrix: Solid
Date Collected: 07/20/22 13:20
Date Received: 07/22/22 12:53

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	31099	07/31/22 10:09	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31095	07/31/22 15:37	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31182	08/01/22 10:32	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30805	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 03:17	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	30600	07/25/22 15:21	KS	XEN MID
Soluble	Analysis	300.0		1			30692	07/26/22 23:27	CH	XEN MID

Client Sample ID: AH-1 (1'-2')

Lab Sample ID: 880-17276-2
Matrix: Solid
Date Collected: 07/20/22 13:40
Date Received: 07/22/22 12:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	31099	07/31/22 10:09	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31095	07/31/22 15:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31182	08/01/22 10:32	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30805	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 03:38	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30600	07/25/22 15:21	KS	XEN MID
Soluble	Analysis	300.0		1			30692	07/26/22 23:36	CH	XEN MID

Client Sample ID: AH-2 (0'-1')

Lab Sample ID: 880-17276-3
Matrix: Solid
Date Collected: 07/20/22 11:00
Date Received: 07/22/22 12:53

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	31099	07/31/22 10:09	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31095	07/31/22 16:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31182	08/01/22 10:32	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30805	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 04:00	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	30600	07/25/22 15:21	KS	XEN MID
Soluble	Analysis	300.0		1			30692	07/26/22 23:45	CH	XEN MID

Client Sample ID: AH-2 (2'-3')

Lab Sample ID: 880-17276-4
Matrix: Solid
Date Collected: 07/20/22 11:20
Date Received: 07/22/22 12:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	31099	07/31/22 10:09	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31095	07/31/22 16:39	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31182	08/01/22 10:32	SM	XEN MID

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Client Sample ID: AH-2 (2'-3')

Lab Sample ID: 880-17276-4
Matrix: Solid
Date Collected: 07/20/22 11:20
Date Received: 07/22/22 12:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			30805	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 04:21	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	30600	07/25/22 15:21	KS	XEN MID
Soluble	Analysis	300.0		1			30692	07/26/22 23:54	CH	XEN MID

Client Sample ID: AH-2 (4'-5')

Lab Sample ID: 880-17276-5
Matrix: Solid
Date Collected: 07/20/22 11:40
Date Received: 07/22/22 12:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	31099	07/31/22 10:09	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31095	07/31/22 17:00	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31182	08/01/22 10:32	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30805	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 04:43	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	30600	07/25/22 15:21	KS	XEN MID
Soluble	Analysis	300.0		5			30692	07/27/22 00:22	CH	XEN MID

Client Sample ID: AH-3 (0'-1')

Lab Sample ID: 880-17276-6
Matrix: Solid
Date Collected: 07/20/22 12:00
Date Received: 07/22/22 12:53

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	31099	07/31/22 10:09	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31095	07/31/22 17:21	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31182	08/01/22 10:32	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30805	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 05:04	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	30600	07/25/22 15:21	KS	XEN MID
Soluble	Analysis	300.0		1			30692	07/27/22 00:31	CH	XEN MID

Client Sample ID: AH-3 (1'-2')

Lab Sample ID: 880-17276-7
Matrix: Solid
Date Collected: 07/20/22 12:20
Date Received: 07/22/22 12:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	31099	07/31/22 10:09	EL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	31095	07/31/22 18:46	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			31182	08/01/22 10:32	SM	XEN MID
Total/NA	Analysis	8015 NM		1			30805	07/27/22 10:58	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	30666	07/26/22 10:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			30643	07/27/22 05:26	AJ	XEN MID

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Client Sample ID: AH-3 (1'-2')

Date Collected: 07/20/22 12:20
Date Received: 07/22/22 12:53

Lab Sample ID: 880-17276-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	30600	07/25/22 15:21	KS	XEN MID
Soluble	Analysis	300.0		5			30692	07/27/22 00:40	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Tetra Tech, Inc. Job ID: 880-17276-1
Project/Site: Buck Federal CTB SDG: Lea County NM

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

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
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Tetra Tech, Inc. Job ID: 880-17276-1
Project/Site: Buck Federal CTB SDG: Lea County NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (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.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Buck Federal CTB

Job ID: 880-17276-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-17276-1	AH-1 (0'-1')	Solid	07/20/22 13:20	07/22/22 12:53
880-17276-2	AH-1 (1'-2')	Solid	07/20/22 13:40	07/22/22 12:53
880-17276-3	AH-2 (0'-1')	Solid	07/20/22 11:00	07/22/22 12:53
880-17276-4	AH-2 (2'-3')	Solid	07/20/22 11:20	07/22/22 12:53
880-17276-5	AH-2 (4'-5')	Solid	07/20/22 11:40	07/22/22 12:53
880-17276-6	AH-3 (0'-1')	Solid	07/20/22 12:00	07/22/22 12:53
880-17276-7	AH-3 (1'-2')	Solid	07/20/22 12:20	07/22/22 12:53

eurofins | Environment Testing Xenco

Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300
Midland TX (432) 704-5440 San Antonio TX (210) 509-3334
EL Paso TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199

Work Order No: 17276

www.xenco.com Page _____ of _____

Project Manager	Christian Llull	Bill to (if different)	Christian Llull
Company Name	Tetra Tech	Company Name	
Address		Address	
City, State ZIP		City, State ZIP	
Phone	(512) 338-1667	Email	christian.llull@tetratech.com

Work Order Comments

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

Project Name	Buck Federal CTB	Turn Around	☒ Routine ☐ Rush
Project Number	212C-MD-02589	Due Date	
Project Location	Lea County, NM	TAT starts the day received by the lab if received by 4 30pm	
Sampler's Name	Joe Tyler		
PO #:			

SAMPLE RECEIPT			
Temp Blank	Yes (No)	Wet Ice	(Yes) No
Samples Received Intact	(Yes) No	Thermometer ID	IR8
Cooler Custody Seals	Yes No (N/A)	Correction Factor	+.20
Sample Custody Seals	Yes No (N/A)	Temperature Reading	5.6
Total Containers		Corrected Temperature	5.8

Preservative Codes

None NO | DI Water H_2O
Cool Cool | MeOH Me
HCL HC | HNO_3 HN
H_2SO_4 H_2 | NaOH Na
H_3PO_4 HP
$NaHSO_4$ NABIS
$Na_2S_2O_3$ $NaSO_3$
Zn Acetate+NaOH Zn
NaOH+Ascorbic Acid SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	TPH 8015	Chlorides	Sample Comments
AH-1 (0-1')	So.l	7-20	1320	-	G	01		✓	✓	✓	
AH-1 (1'-2')	↓	↓	1340	↓	↓	↓		↓	↓	↓	
AH-2 (0'-1')			1100								
AH-2 (2'-3')			1130								
AH-2 (4'-5')			1140								
AH-3 (0'-1')			1200								
AH-3 (1'-2')	↓	↓	1220		↓	↓		↓	↓	↓	

880-17276 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg 1631 / 245 1 / 7470 / 7471

17276

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1		7-27-2022	2		
3		1283	4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

8/1/2022

Loc: 880
17276

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 880-17276-1
SDG Number: Lea County NM

Login Number: 17276
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins 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	

CARDINAL Laboratories

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

September 30, 2022

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: BUCK FEDERAL CTB

Enclosed are the results of analyses for samples received by the laboratory on 09/27/22 13:39.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/27/2022	Sampling Date:	09/27/2022
Reported:	09/30/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Shalyn Rodriguez
Project Location:	COP - LEA CO NM		

Sample ID: BH - 2 (0-1') (H224481-01)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.08	104	2.00	4.40	
Toluene*	<0.050	0.050	09/29/2022	ND	2.01	100	2.00	2.94	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.89	94.4	2.00	2.74	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.84	97.3	6.00	2.29	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	09/28/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	199	99.7	200	0.554	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	206	103	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *82.9 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *85.9 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/27/2022	Sampling Date:	09/27/2022
Reported:	09/30/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Shalyn Rodriguez
Project Location:	COP - LEA CO NM		

Sample ID: BH - 2 (2-3') (H224481-02)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.08	104	2.00	4.40	
Toluene*	<0.050	0.050	09/29/2022	ND	2.01	100	2.00	2.94	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.89	94.4	2.00	2.74	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.84	97.3	6.00	2.29	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	09/28/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	199	99.7	200	0.554	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	206	103	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *90.1 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *94.8 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/27/2022	Sampling Date:	09/27/2022
Reported:	09/30/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Shalyn Rodriguez
Project Location:	COP - LEA CO NM		

Sample ID: BH - 2 (4-5') (H224481-03)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.08	104	2.00	4.40	
Toluene*	<0.050	0.050	09/29/2022	ND	2.01	100	2.00	2.94	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.89	94.4	2.00	2.74	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.84	97.3	6.00	2.29	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	09/28/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	199	99.7	200	0.554	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	206	103	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *88.6 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *94.6 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/27/2022	Sampling Date:	09/27/2022
Reported:	09/30/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Shalyn Rodriguez
Project Location:	COP - LEA CO NM		

Sample ID: BH - 2 (6-7') (H224481-04)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.08	104	2.00	4.40	
Toluene*	<0.050	0.050	09/29/2022	ND	2.01	100	2.00	2.94	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.89	94.4	2.00	2.74	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.84	97.3	6.00	2.29	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	09/28/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	199	99.7	200	0.554	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	206	103	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *85.4 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *91.1 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/27/2022	Sampling Date:	09/27/2022
Reported:	09/30/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Shalyn Rodriguez
Project Location:	COP - LEA CO NM		

Sample ID: BH - 2 (8-9') (H224481-05)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.08	104	2.00	4.40	
Toluene*	<0.050	0.050	09/29/2022	ND	2.01	100	2.00	2.94	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.89	94.4	2.00	2.74	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.84	97.3	6.00	2.29	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	09/28/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	199	99.7	200	0.554	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	206	103	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *79.6 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *83.6 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/27/2022	Sampling Date:	09/27/2022
Reported:	09/30/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Shalyn Rodriguez
Project Location:	COP - LEA CO NM		

Sample ID: BH - 2 (14-15') (H224481-06)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.08	104	2.00	4.40	
Toluene*	<0.050	0.050	09/29/2022	ND	2.01	100	2.00	2.94	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.89	94.4	2.00	2.74	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.84	97.3	6.00	2.29	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	09/28/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	199	99.7	200	0.554	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	206	103	200	2.09	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *77.9 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *81.7 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/27/2022	Sampling Date:	09/27/2022
Reported:	09/30/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Shalyn Rodriguez
Project Location:	COP - LEA CO NM		

Sample ID: BH - 2 (19-20') (H224481-07)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.08	104	2.00	4.40	
Toluene*	<0.050	0.050	09/29/2022	ND	2.01	100	2.00	2.94	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.89	94.4	2.00	2.74	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.84	97.3	6.00	2.29	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	09/28/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	196	97.8	200	2.77	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	185	92.5	200	1.19	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *85.2 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *93.3 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1/1

Company Name:	ConocoPhillips
Project Manager:	Christian Llull
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	212C-MD-02589 Project Owner:
Project Name:	Buck Federal CTB
Project Location:	Lea County, NM
Sampler Name:	Colton Bickerstaff

BILL TO

P.O. #:	
Company:	Tetra Tech
Attn:	Christian Llull
Address:	by email
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	BTEX	Chlorides
H224481																	
1	BH-2 (0-1')	G	1			X					X		9/27/22		X	X	X
2	BH-2 (2'-3')																
3	BH-2 (4'-5')																
4	BH-2 (6'-7')																
5	BH-2 (8'-9')																
6	BH-2 (14'-15')																
7	BH-2 (19'-20')																

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

Relinquished By:	Date: 9/27/22	Received By:	Verbal Result: ☐ Yes ☑ No Add'l Phone #:
Colton Bickerstaff	Time: 1339	S Rodriguez	All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	christian.llull@tetratech.com
	Time:		REMARKS:

Delivered By: (Circle One)	Observed Temp. °C 2.4°	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: ☑ Standard ☐ Rush
Sampler - UPS - Bus - Other:	Corrected Temp. °C 1.8°	☑ Yes ☐ Yes ☐ No ☐ No	SR	Thermometer ID #113 Correction Factor -0.5°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No; Observed Temp. °C; Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

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

October 03, 2022

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: BUCK FEDERAL CTB

Enclosed are the results of analyses for samples received by the laboratory on 09/28/22 11:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (0-1') (H224505-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.16	108	2.00	1.36	
Toluene*	<0.050	0.050	09/29/2022	ND	2.04	102	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.94	96.8	2.00	1.32	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.92	98.7	6.00	1.30	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.7 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/29/2022	ND	226	113	200	3.96	
DRO >C10-C28*	<10.0	10.0	09/29/2022	ND	210	105	200	3.10	
EXT DRO >C28-C36	<10.0	10.0	09/29/2022	ND					

Surrogate: 1-Chlorooctane *84.0 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *97.4 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (2'-3') (H224505-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.16	108	2.00	1.36	
Toluene*	<0.050	0.050	09/29/2022	ND	2.04	102	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.94	96.8	2.00	1.32	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.92	98.7	6.00	1.30	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.1 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/29/2022	ND	226	113	200	3.96	
DRO >C10-C28*	<10.0	10.0	09/29/2022	ND	210	105	200	3.10	
EXT DRO >C28-C36	<10.0	10.0	09/29/2022	ND					

Surrogate: 1-Chlorooctane *93.2 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *106 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (3'-4') (H224505-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.16	108	2.00	1.36	
Toluene*	<0.050	0.050	09/29/2022	ND	2.04	102	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.94	96.8	2.00	1.32	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.92	98.7	6.00	1.30	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.0 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/29/2022	ND	226	113	200	3.96	
DRO >C10-C28*	<10.0	10.0	09/29/2022	ND	210	105	200	3.10	
EXT DRO >C28-C36	<10.0	10.0	09/29/2022	ND					

Surrogate: 1-Chlorooctane *87.8 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *99.0 %* *46.3-178*

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Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (4'-5') (H224505-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.16	108	2.00	1.36	
Toluene*	<0.050	0.050	09/29/2022	ND	2.04	102	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.94	96.8	2.00	1.32	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.92	98.7	6.00	1.30	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *92.5 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**992**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/29/2022	ND	226	113	200	3.96	
DRO >C10-C28*	<10.0	10.0	09/29/2022	ND	210	105	200	3.10	
EXT DRO >C28-C36	<10.0	10.0	09/29/2022	ND					

Surrogate: 1-Chlorooctane *89.6 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *100 %* *46.3-178*

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Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (6'-7') (H224505-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.16	108	2.00	1.36	
Toluene*	<0.050	0.050	09/29/2022	ND	2.04	102	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.94	96.8	2.00	1.32	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.92	98.7	6.00	1.30	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.9 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1680**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/29/2022	ND	226	113	200	3.96	
DRO >C10-C28*	<10.0	10.0	09/29/2022	ND	210	105	200	3.10	
EXT DRO >C28-C36	<10.0	10.0	09/29/2022	ND					

Surrogate: 1-Chlorooctane *86.3 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *98.9 %* *46.3-178*

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Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (8'-9') (H224505-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.16	108	2.00	1.36	
Toluene*	<0.050	0.050	09/29/2022	ND	2.04	102	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.94	96.8	2.00	1.32	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.92	98.7	6.00	1.30	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *91.9 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**944**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/29/2022	ND	226	113	200	3.96	
DRO >C10-C28*	**28.5**	10.0	09/29/2022	ND	210	105	200	3.10	
EXT DRO >C28-C36	<10.0	10.0	09/29/2022	ND					

Surrogate: 1-Chlorooctane *87.4 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *102 %* *46.3-178*

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (14'-15') (H224505-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/29/2022	ND	2.16	108	2.00	1.36	
Toluene*	<0.050	0.050	09/29/2022	ND	2.04	102	2.00	1.97	
Ethylbenzene*	<0.050	0.050	09/29/2022	ND	1.94	96.8	2.00	1.32	
Total Xylenes*	<0.150	0.150	09/29/2022	ND	5.92	98.7	6.00	1.30	
Total BTEX	<0.300	0.300	09/29/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *93.6 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2000**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	231	116	200	14.0	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	228	114	200	21.8	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *81.1 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *92.0 %* *46.3-178*

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (19'-20') (H224505-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/01/2022	ND	2.24	112	2.00	0.107	
Toluene*	<0.050	0.050	10/01/2022	ND	2.17	109	2.00	0.112	
Ethylbenzene*	<0.050	0.050	10/01/2022	ND	2.14	107	2.00	1.33	
Total Xylenes*	<0.150	0.150	10/01/2022	ND	6.55	109	6.00	2.79	
Total BTEX	<0.300	0.300	10/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1800**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	231	116	200	14.0	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	228	114	200	21.8	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *87.5 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *98.2 %* *46.3-178*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (24'-25') (H224505-09)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/01/2022	ND	2.24	112	2.00	0.107	
Toluene*	<0.050	0.050	10/01/2022	ND	2.17	109	2.00	0.112	
Ethylbenzene*	<0.050	0.050	10/01/2022	ND	2.14	107	2.00	1.33	
Total Xylenes*	<0.150	0.150	10/01/2022	ND	6.55	109	6.00	2.79	
Total BTEX	<0.300	0.300	10/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1580**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	231	116	200	14.0	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	228	114	200	21.8	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *83.8 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *97.3 %* *46.3-178*

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CARDINAL Laboratories

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Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (29'-30') (H224505-10)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/01/2022	ND	2.24	112	2.00	0.107	
Toluene*	<0.050	0.050	10/01/2022	ND	2.17	109	2.00	0.112	
Ethylbenzene*	<0.050	0.050	10/01/2022	ND	2.14	107	2.00	1.33	
Total Xylenes*	<0.150	0.150	10/01/2022	ND	6.55	109	6.00	2.79	
Total BTEX	<0.300	0.300	10/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	231	116	200	14.0	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	228	114	200	21.8	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *91.2 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *104 %* *46.3-178*

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CARDINAL Laboratories

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Analytical Results For:

TETRA TECH
CHRISTIAN LLULL
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/28/2022	Sampling Date:	09/28/2022
Reported:	10/03/2022	Sampling Type:	Soil
Project Name:	BUCK FEDERAL CTB	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02589	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA CO NM		

Sample ID: BH - 1 (34'-35') (H224505-11)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/01/2022	ND	2.24	112	2.00	0.107	
Toluene*	<0.050	0.050	10/01/2022	ND	2.17	109	2.00	0.112	
Ethylbenzene*	<0.050	0.050	10/01/2022	ND	2.14	107	2.00	1.33	
Total Xylenes*	<0.150	0.150	10/01/2022	ND	6.55	109	6.00	2.79	
Total BTEX	<0.300	0.300	10/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	09/29/2022	ND	416	104	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/28/2022	ND	231	116	200	14.0	
DRO >C10-C28*	<10.0	10.0	09/28/2022	ND	228	114	200	21.8	
EXT DRO >C28-C36	<10.0	10.0	09/28/2022	ND					

Surrogate: 1-Chlorooctane *82.2 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *92.4 %* *46.3-178*

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Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 2 (CB)

Company Name:	ConocoPhillips
Project Manager:	Christian Llull
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	212C-MD-02599 Project Owner:
Project Name:	Buck Federal CTB
Project Location:	Lea County, NM
Sampler Name:	Cotton Bickerstaff

BILL TO

P.O. #:	
Company:	Tetra Tech
Attn:	Christian Llull
Address:	by email
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	TIME	TPH	BTEX	Chlorides
H224505																	
1	BH-1 (0-1')	G	1			X					X		9/28/22		X	X	X
2	BH-1 (2'-3')																
3	BH-1 (3'-4')																
4	BH-1 (4'-5')																
5	BH-1 (6-7')																
6	BH-1 (9'-9')																
7	BH-1 (14-15)																
8	BH-1 (19'-20')																
9	BH-1 (24'-25')																
10	BH-1 (29'-30')																

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

Relinquished By:	Date: 9/28/22	Received By:	
Cotton B	Time: 1135		
Relinquished By:	Date:	Received By:	
	Time:		

Verbal Result: ☐ Yes ☑ No Add'l Phone #:

All Results are emailed. Please provide Email address:

Christian.Llull@tetratech.com

REMARKS:

-0.9° Temp Blank

Delivered By: (Circle One)	Observed Temp. °C	3.8	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	TO
Sampler - UPS - Bus - Other:	Corrected Temp. °C	3.2			

Turnaround Time: Standard ☑ Rush ☐

Thermometer ID #113
Correction Factor -0.5°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ Nc; Intact ☐ Yes ☐ No; Observed Temp. °C; Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2/2

Company Name: ConocoPhillips
Project Manager: Christian Llull
Address:
City: State: Zip:
Phone #: Fax #:
Project #: 212c-MD-02589 Project Owner:
Project Name: Buck Federal LTB
Project Location: Lea County, NM
Sampler Name: Colton Brickerstaff

BILL TO

P.O. #:
Company: Tetra Tech
Attn: Christian Llull
Address: by email
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	BTEX	Chlorides
H224505 11	BH-1 (34'-35')	G	1			X					X		9/29/22		X	X	X

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

Relinquished By: Colton B. Date: 9/22/22 Time: 1135
Received By: Tamara Oldaker
Relinquished By: Date: Time:
Received By:

Verbal Result: ☐ Yes ☑ No Add'l Phone #:
All Results are emailed. Please provide Email address:
Christian.Llull@tetratech.com
REMARKS:
-0.9° Temp Blank

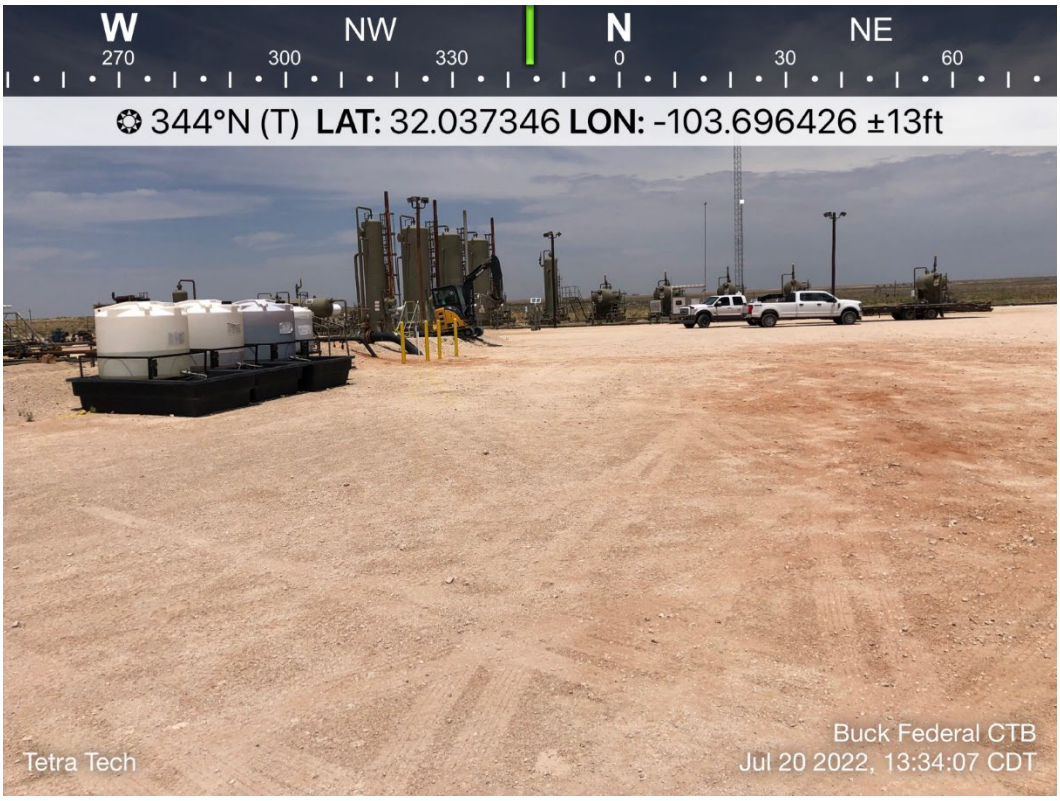
Delivered By: (Circle One)
Sampler - UPS - Bus - Other:
Observed Temp. °C 3.8
Corrected Temp. °C 3.2
Sample Condition: Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No
CHECKED BY: (Initials) T.O.

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #113
Correction Factor -0.5°C
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

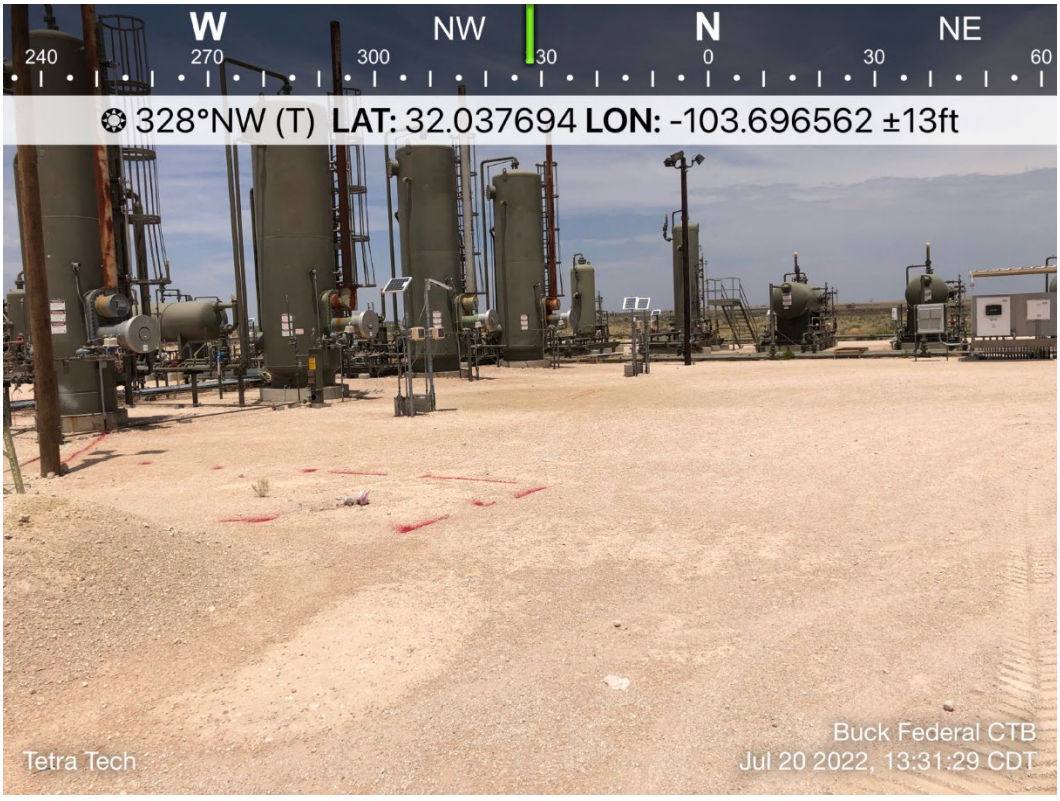
FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

APPENDIX E
Photographic Documentation

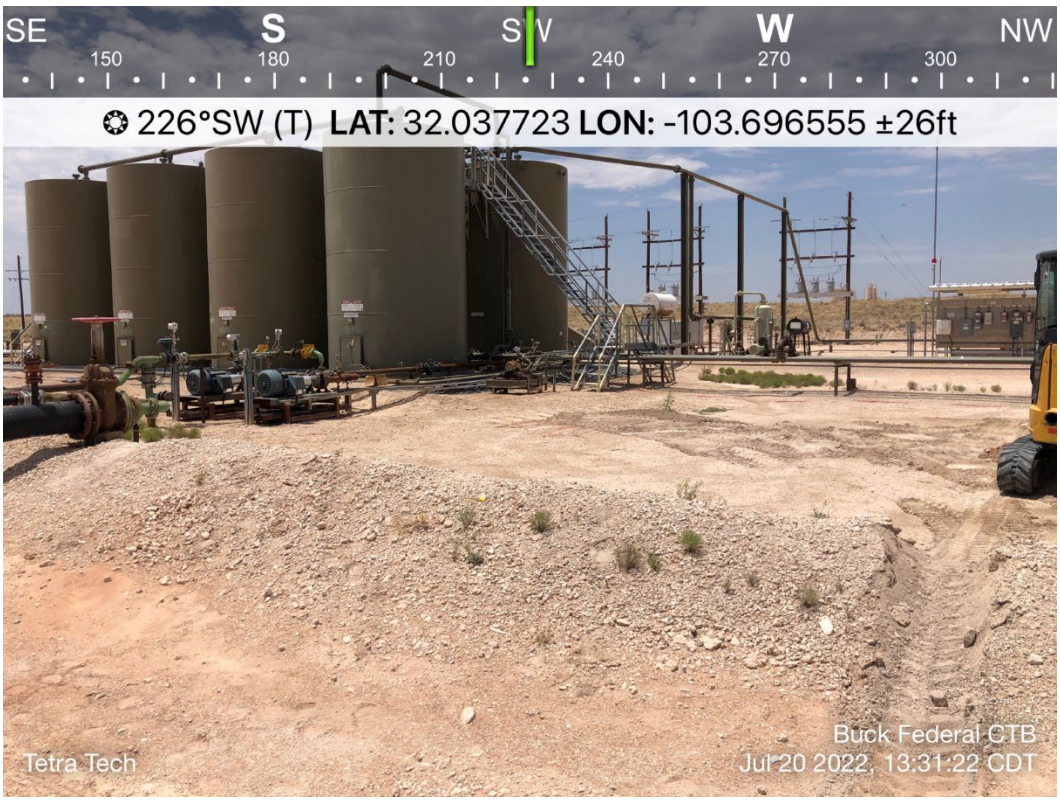


TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View north, pad area, equipment, and small storage tanks.	1
	SITE NAME	ConocoPhillips Buck Federal CTB	7/20/2022

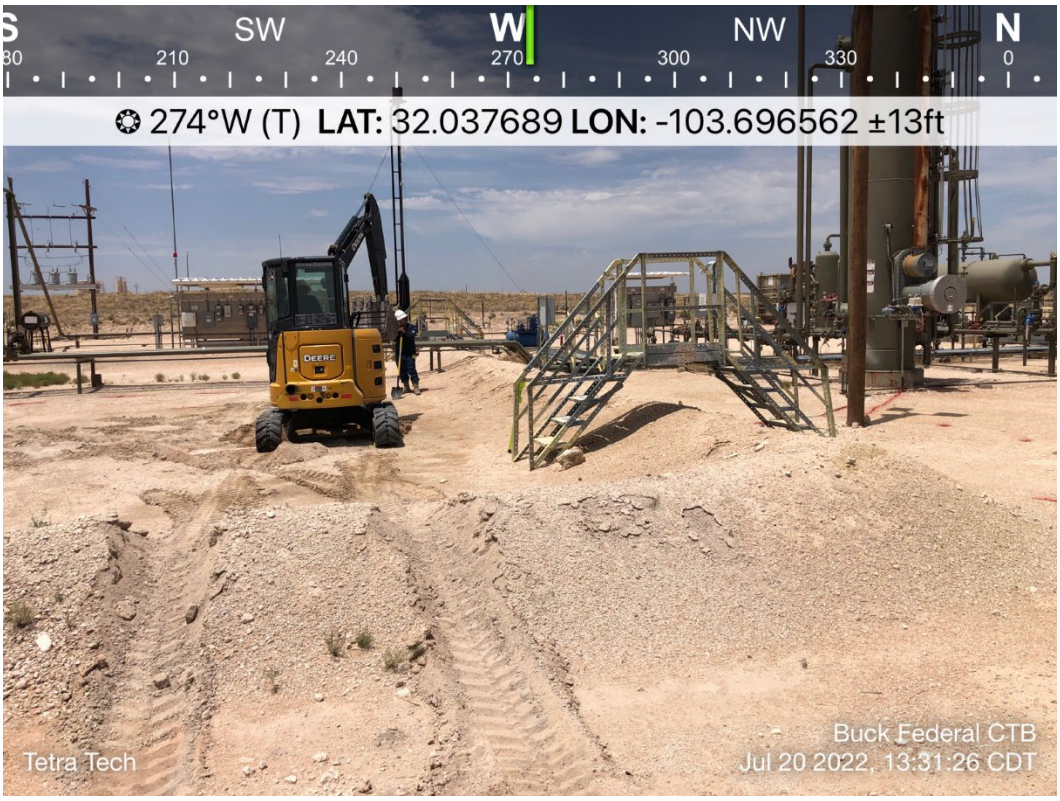


TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View northwest, subsurface utilities marked with paint, northern section of equipment.	2
	SITE NAME	ConocoPhillips Buck Federal CTB	7/20/2022

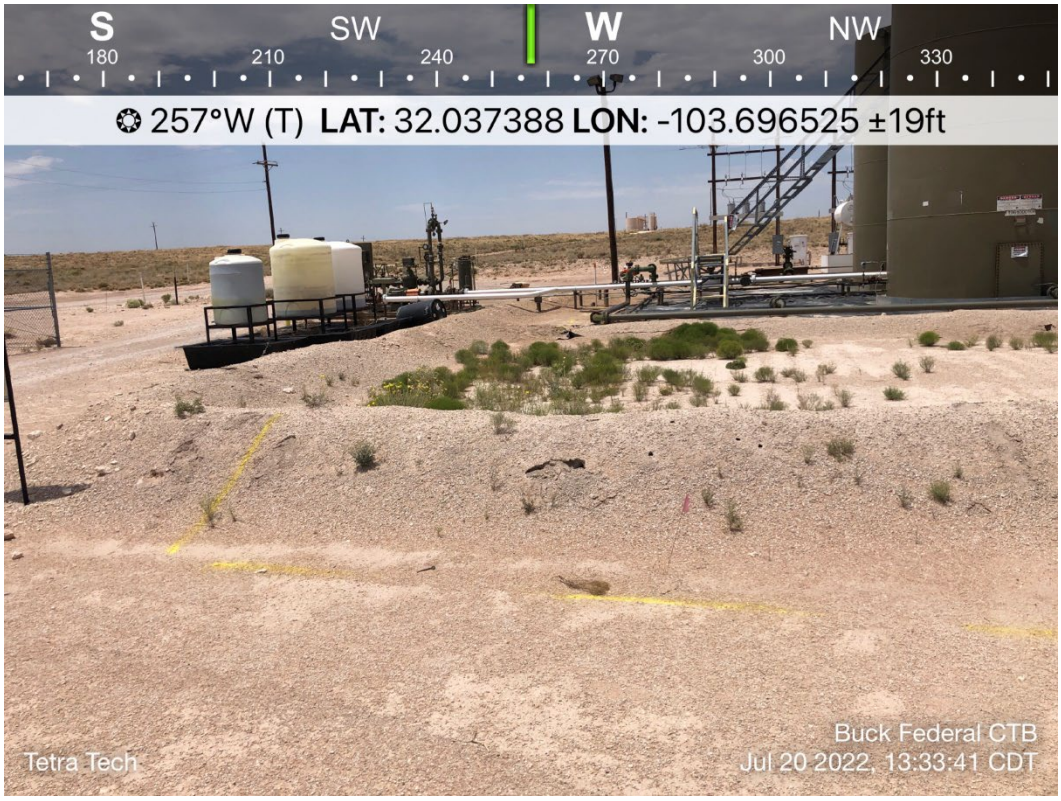
TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View south, tank battery inside berm.	3
	SITE NAME	ConocoPhillips Buck Federal CTB	7/20/2022



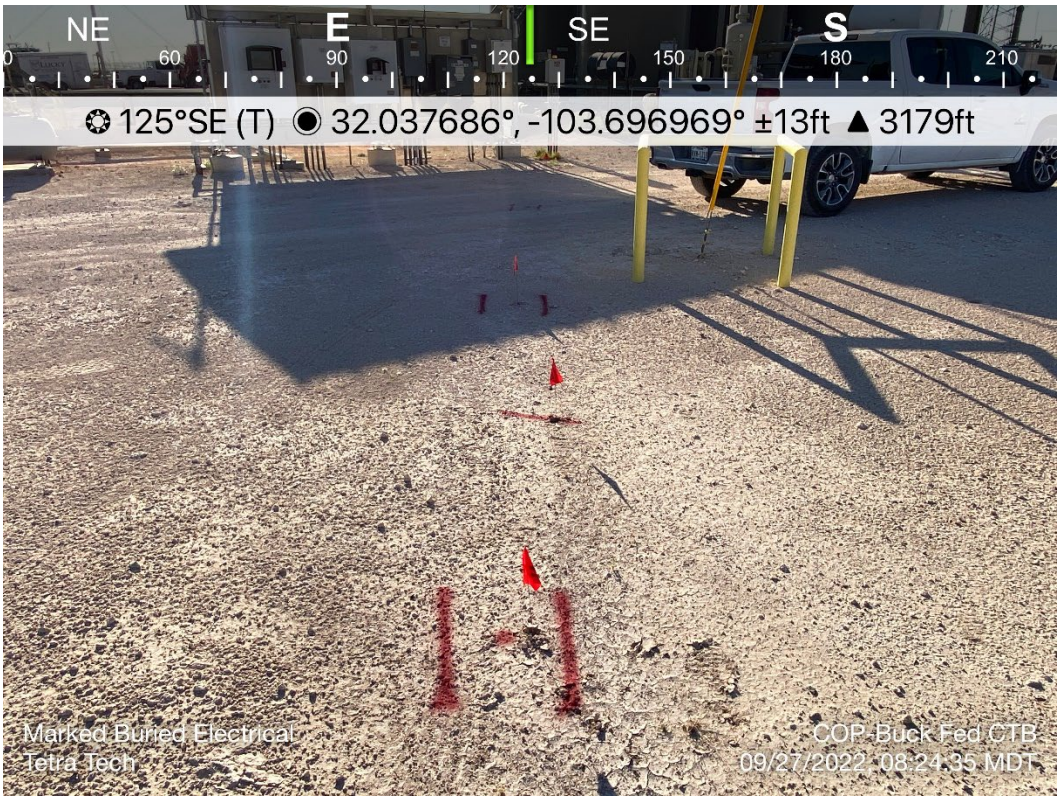
TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View southwest, tank battery surrounded by berm, with small excavator partially in view for trenching.	4
	SITE NAME	ConocoPhillips Buck Federal CTB	7/20/2022



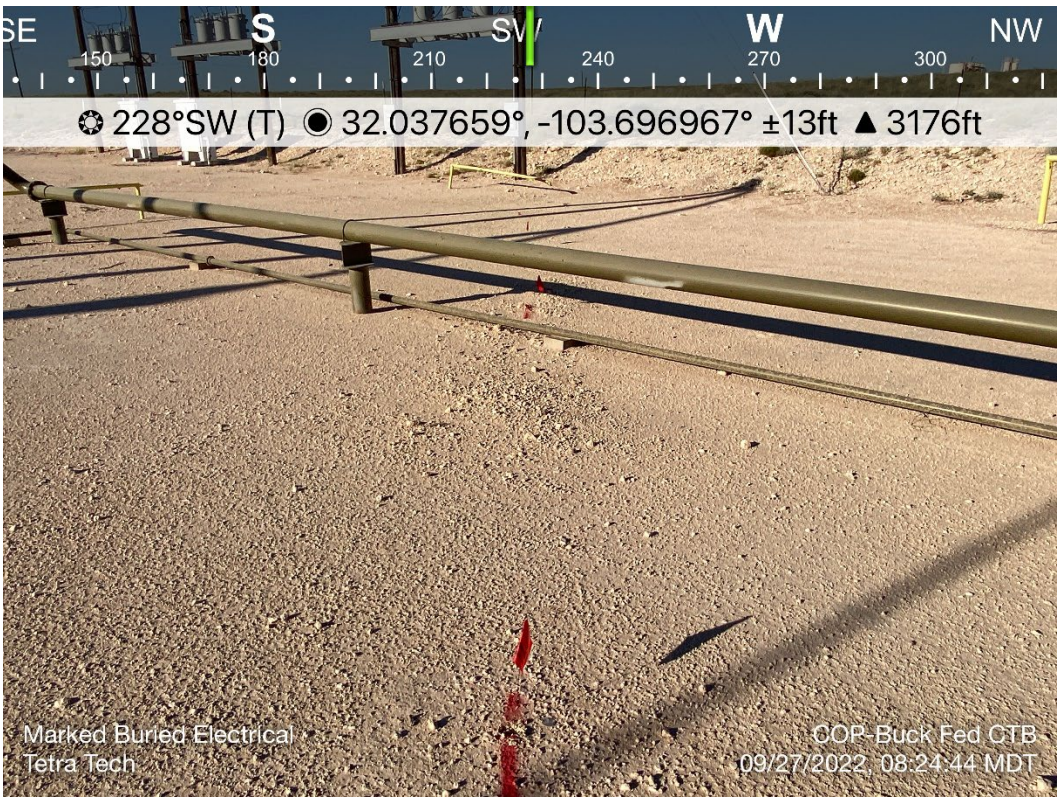
TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View east, trenching activities conducted for assessment purposes.	5
	SITE NAME	ConocoPhillips Buck Federal CTB	7/20/2022



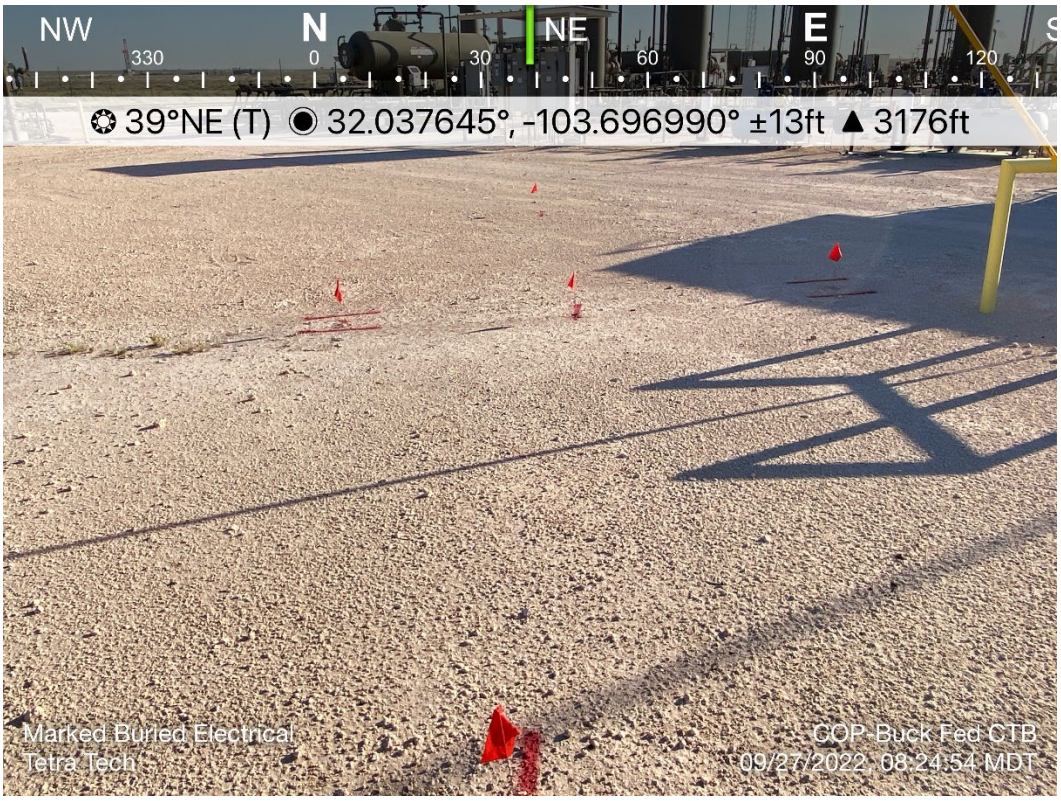
TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View southwest. Southern edge of berm outside release area.	6
	SITE NAME	ConocoPhillips Buck Federal CTB	7/20/2022



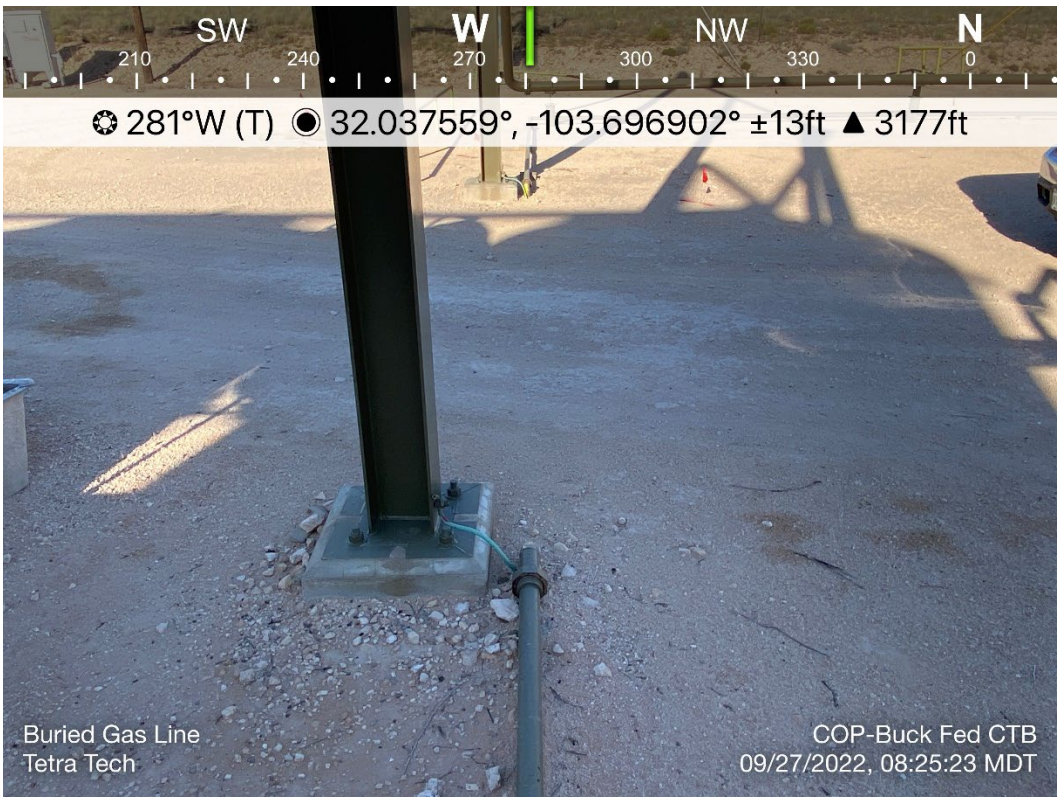
TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View southeast. Subsurface electrical lines extending towards release area.	7
	SITE NAME	ConocoPhillips Buck Federal CTB	9/27/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View southwest. Subsurface electrical line extending away from release area.	8
	SITE NAME	ConocoPhillips Buck Federal CTB	9/27/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View northeast. Subsurface electrical lines extending towards the release area	9
	SITE NAME	ConocoPhillips Buck Federal CTB	9/27/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02589	DESCRIPTION	View west. Subsurface gas line extending away from the release area.	10
	SITE NAME	ConocoPhillips Buck Federal CTB	9/27/2022

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 157521

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 157521
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Closure Report Approved. Please implement 19.15.29.13 NMAC when completing P&A.	12/9/2022