TETRA TECH

October 6, 2021

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

Re: Closure Report
ConocoPhillips
Warren Unit 134 Flowline Release
Unit Letter L, Section 27, Township 20 South, and Range 38 East
Lea County, New Mexico
Incident ID# NAPP2107046560

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips (COP) to assess a release that occurred from a flowline of the Warren Unit 134 well (API #30-025-33487) at a point approximately 1,500 feet (ft) southeast of the well. The release footprint is located in Public Land Survey System (PLSS) Unit Letter L, Section 27, Township 20 South and Range 38 East, Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.542155°, -103.144711°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico C-141 Initial Report (Appendix A), the release was discovered on March 2, 2021. The release occurred as the result of a flowline leak and encompasses an estimated area of 600 square ft. Approximately 6 barrels (bbls) of produced water and 0.5 bbls of oil were reported released, of which 0 bbls of fluid were recovered. The New Mexico Oil Conservation District (NMOCD) received the C-141 report form for the release on March 11, 2021. The NMOCD Incident ID for this release is NAPP2107046560.

SITE CHARACTERIZATION

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

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. The search radius was expanded and based on available data from one (1) water well located within 2,500 meters (approximately 1.55 miles) of the Site, the average depth to groundwater is 65 ft below ground surface (bgs).

As the available water level information was from a well farther than ½ mile away from the site and the data was more than 25 years old, COP elected to drill a boring to depth for groundwater verification. On May 12, 2021, a licensed well drilling subcontractor was onsite to a drill a groundwater determination borehole to 55 ft bgs and within a ½ mile radius of the release location. The borehole was temporarily set, screened and

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

sealed using 2-inch PVC casing; 35 feet of solid riser and 20 feet of .010" slotted screen. The borehole was left for 72 hours and checked for the presence of groundwater. No water was detected, and the borehole was dry. The screen and riser were removed, and the borehole was plugged with 3/8" bentonite chips on May 18, 2021. The borehole coordinates are 32.120658°, -103.563616° and the location is indicated on Figure 3. The site characterization data, boring log, and temporary well diagram are included in Appendix B.

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 and the depth to water determination boring were used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

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

Constituent	Site Specific RRALs
Chloride	10,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 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 ft bgs) outside of active oil and gas operations are as follows:

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

SITE ASSESSMENT

The release footprint is located in an off-pad area. In order to achieve horizontal and vertical delineation of the release extent, Tetra Tech personnel conducted soil sampling on March 18, 2021, on behalf of ConocoPhillips. A total of six borings (AH-1 through AH-6) were installed with a hand auger. Boring locations AH-1 through AH-4 were installed around the perimeter of the release extent to achieve horizontal delineation. Boring locations AH-5 and AH-6 were installed within the release footprint to achieve vertical delineation.

A total of nineteen (19) soil samples were collected from the six (6) locations within and surrounding the release extent. These soil samples were sent to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chloride via EPA Method SM45000Cl-B, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. Boring locations are shown in Figure 3.

SUMMARY OF SAMPLING RESULTS

Results from the March 2021 soil sampling event are summarized in Table 1. The analytical results associated with the AH-5 and AH-6 boring locations exceeded the Site chloride reclamation requirement of 600 mg/kg in the upper four feet. Analytical results associated with the AH-5 boring location below four feet did not exceed the proposed RRAL for chloride of 10,000 mg/kg. There were no other analytical results which exceeded the chloride reclamation requirement during the assessment.

The analytical results associated with the AH-5 and AH-6 boring locations exceeded the reclamation concentration for TPH (100 mg/kg) down to 2 ft bgs and 4 ft bgs, respectively. The analytical results associated with AH-6 boring locations exceeded the reclamation requirement for BTEX (50 mg/kg) down to 4 ft bgs. The remainder of the samples analyzed were below the BTEX and/or TPH Site RRALs of 50 mg/kg and 100 mg/kg, respectively. Horizontal and vertical delineation was achieved during this assessment.

REMEDIATION WORK PLAN AND CONFIRMATION SAMPLING PLAN

The Release Characterization Work Plan (Work Plan) was prepared by Tetra Tech on behalf of ConocoPhillips and submitted to NMOCD on May 27, 2021 with fee application payment PO Number 9W2TN-210527-C-1410. The Work Plan described the results of the release assessment and provided characterization of the impact at the site. The Work Plan was approved via email by Chad Hensley on Friday, August 6, 2021. Mr. Hensley also executed page 4 of the C-141 form included with the Work Plan.

REMEDIATION ACTIVITIES AND CONFIRMATION SAMPLING

From September 7, 2021 through September 17, 2021, Tetra Tech personnel were onsite to supervise the remediation activities proposed in the approved Work Plan, including excavation, disposal, and confirmation sampling. Impacted soils were excavated until a representative sample from the walls and bottom of the excavation had a field screening value inferred as lower than the RRALs for the Site. Once field screening was completed, confirmation floor and sidewall samples were collected for laboratory analysis to verify that the impacted materials were properly removed. Each confirmation sample laboratory analytical result was directly compared to the proposed RRALs to demonstrate compliance.

Per the approved Confirmation Sampling Plan, confirmation samples were collected such that discrete sample (sidewall and floor) were representative of no more than 200 square feet of excavated area. A total of five (5) floor sample locations and eight (8) sidewall sample locations were collected during the remedial activities. Confirmation sidewall sample locations were categorized with the cardinal direction (N, E, S, W) followed by SW-#. Confirmation floor sample locations were labeled “FS”-#. Selected areas required additional excavation to collect a representative sample that was below the respective RRALs for that location. As the analytical results associated with these sample locations exceeded the respective RRAL, additional excavation was conducted at those locations until field screening results indicated closure criteria were attained.

Iterative confirmation samples were located to encompass the original sample locations that triggered removal (nomenclature defined in Table 2) post-additional excavation. If the sidewall area was expanded due to unacceptable confirmation sample results, the parentheses indicate the expansion iteration. For floor samples, the parentheses indicate the excavation floor depth from which the sample was collected.

Collected confirmation samples were placed into laboratory-provided sample containers, transferred under chain-of-custody, and analyzed within appropriate holding times by Eurofins-Xenco in Midland, Texas. The soil samples were analyzed for TPH (DRO and ORO) by EPA Method 8015, TPH Low Fraction (GRO) by EPA Method 8015D, BTEX by EPA Method 8260B, and chlorides by EPA Method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C.

Per the NMOCD-approved Work Plan, the observed impacted area was excavated to four (4) feet below existing grade. Excavated areas, depths and confirmation sample locations are shown in Figure 4.

After expansion of the excavation and iterative confirmation sampling at sidewall sample locations SSW-1 and WSW-3, all final confirmation soil samples (floor and sidewall) were below the respective RRALs for chloride, BTEX, and TPH. The results of the September 2021 confirmation sampling events are summarized in Table 2.

All the excavated material was transported offsite for proper disposal. Approximately 179 cubic yards of material were transported to the R360 facility in Hobbs, New Mexico. Photographs from the excavated areas prior to backfill are provided in Appendix D. Once confirmation sampling activities were completed and associated analytical results were below the RRALs, the excavated areas were backfilled with clean material to surface grade. The reclaimed areas contain soil backfill consisting of suitable material to establish vegetation at the site. Copies of the waste manifests are included in Appendix E.

As prescribed in the Work Plan, the backfilled areas were seeded in September 2021 to aid in revegetation. Based on the soils at the site and the approved Work Plan, the New Mexico State Land Office (NMSLO) Sandy Loam (SL) Sites Seed Mixture was used for seeding and planted in the amount specified in the pounds pure live seed (PLS) per acre.

Site Inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method of eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate.

CONCLUSION

ConocoPhillips respectfully requests closure of this release based on the confirmation sampling results and remediation activities performed. The final C-141 forms are enclosed in Appendix A. If you have any questions concerning the remediation activities for the Site, please call me at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.

Christian M. Llull, P.G.
Program Manager

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

LIST OF ATTACHMENTS

Figures:

Figure 1 – Overview Map
Figure 2 – Site Location/Topographic Map
Figure 3 – Approximate Release Extent and Site Assessment
Figure 4 – Remediation Extent and Confirmation Sampling Locations

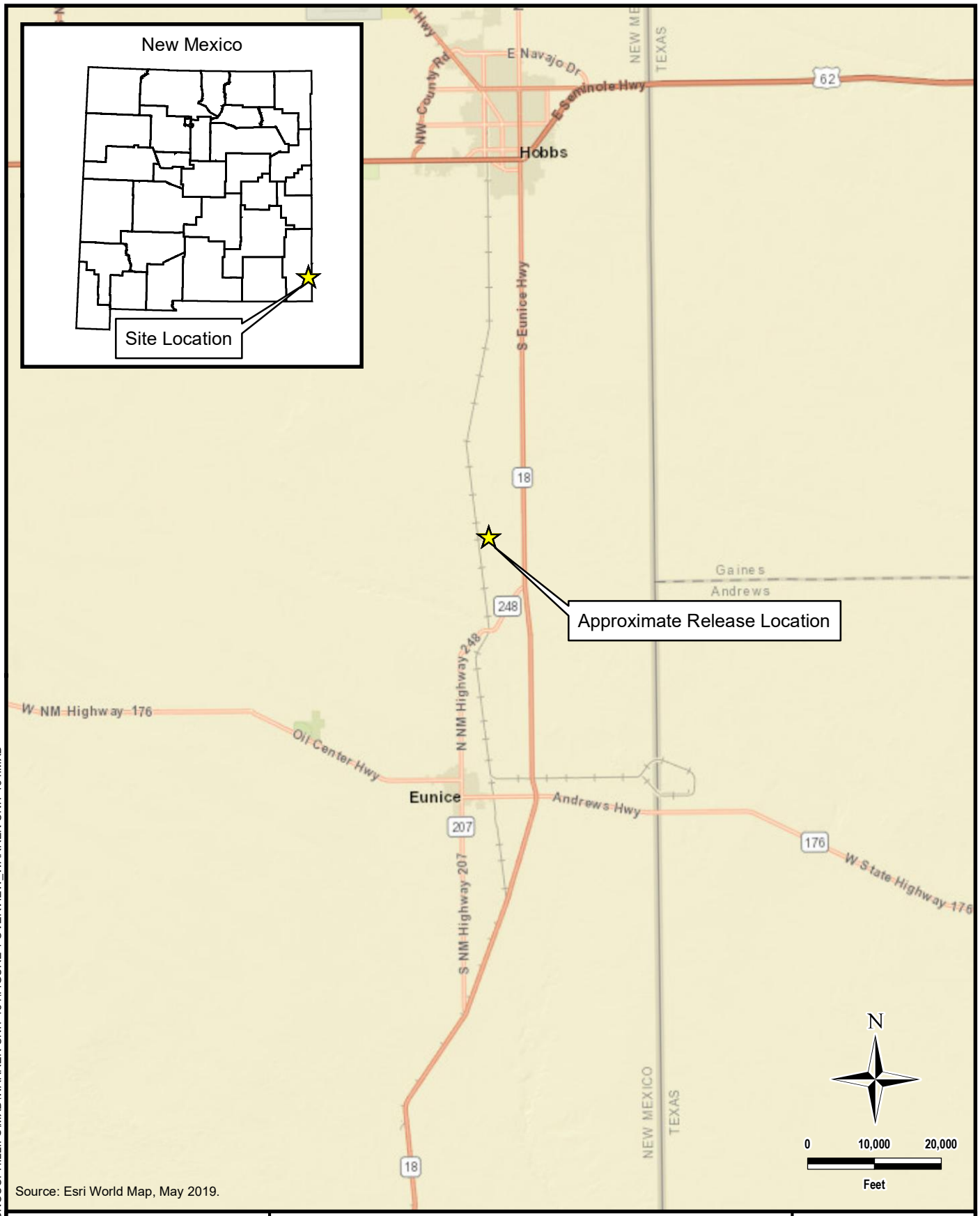
Tables:

Table 1 – Summary of Analytical Results – Initial Soil Assessment
Table 2 – Summary of Analytical Results – Confirmation Sampling

Appendices:

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

FIGURES



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\WARREN UNIT 134\FIGURE 1 OVERVIEW_WARREN UNIT 134.MXD

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

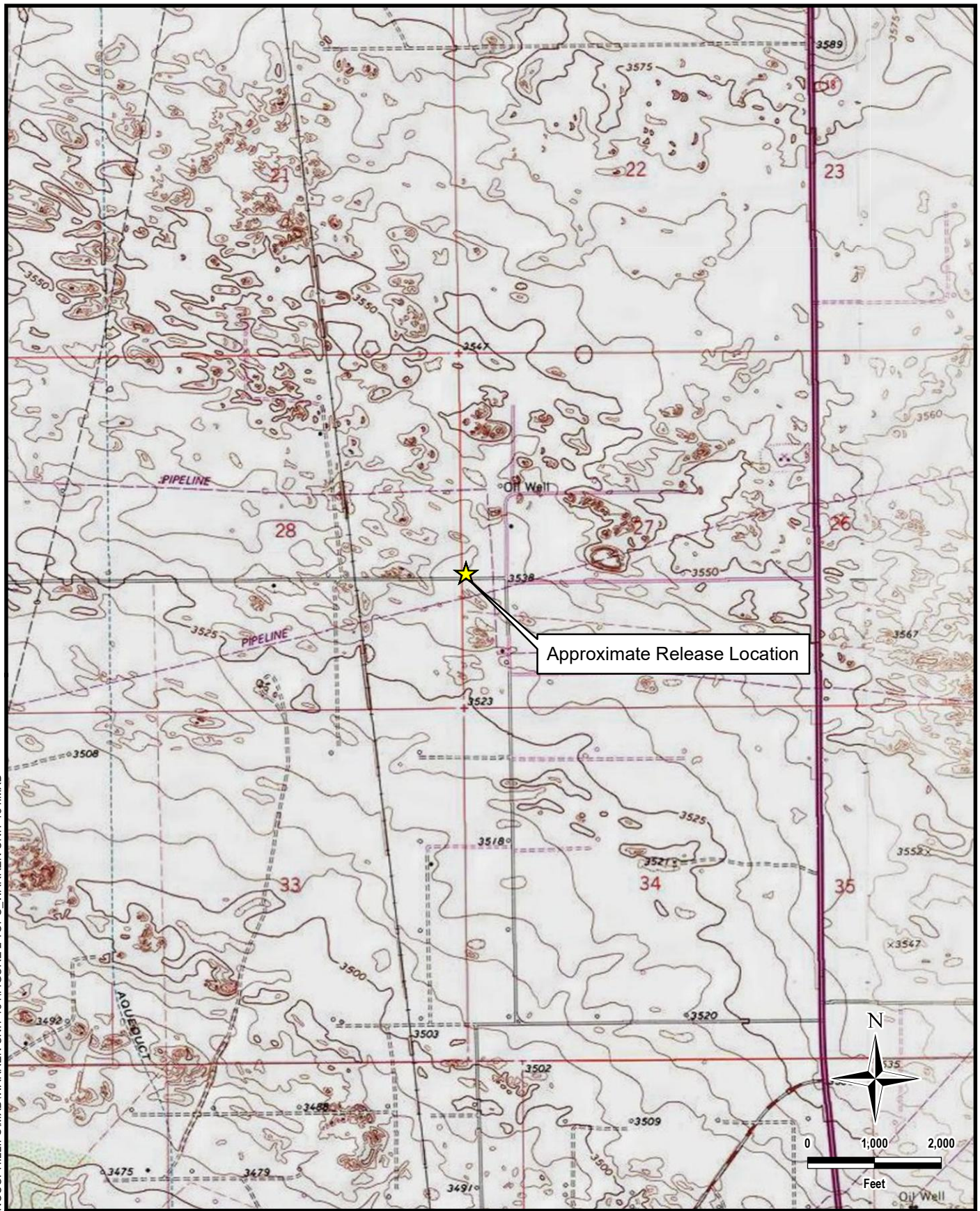
CONOCOPHILLIPS

NAPP2107046560
(32.542155°, -103.144711°)
LEA COUNTY, NEW MEXICO

WARREN UNIT 134 FLOWLINE RELEASE
OVERVIEW MAP

PROJECT NO.:	212C-MD-02377
DATE:	MAY 19, 2021
DESIGNED BY:	AAM

Figure No.
1



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\WARREN UNIT 134\FIGURE 2 TOPO_WARREN UNIT 134.MXD

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

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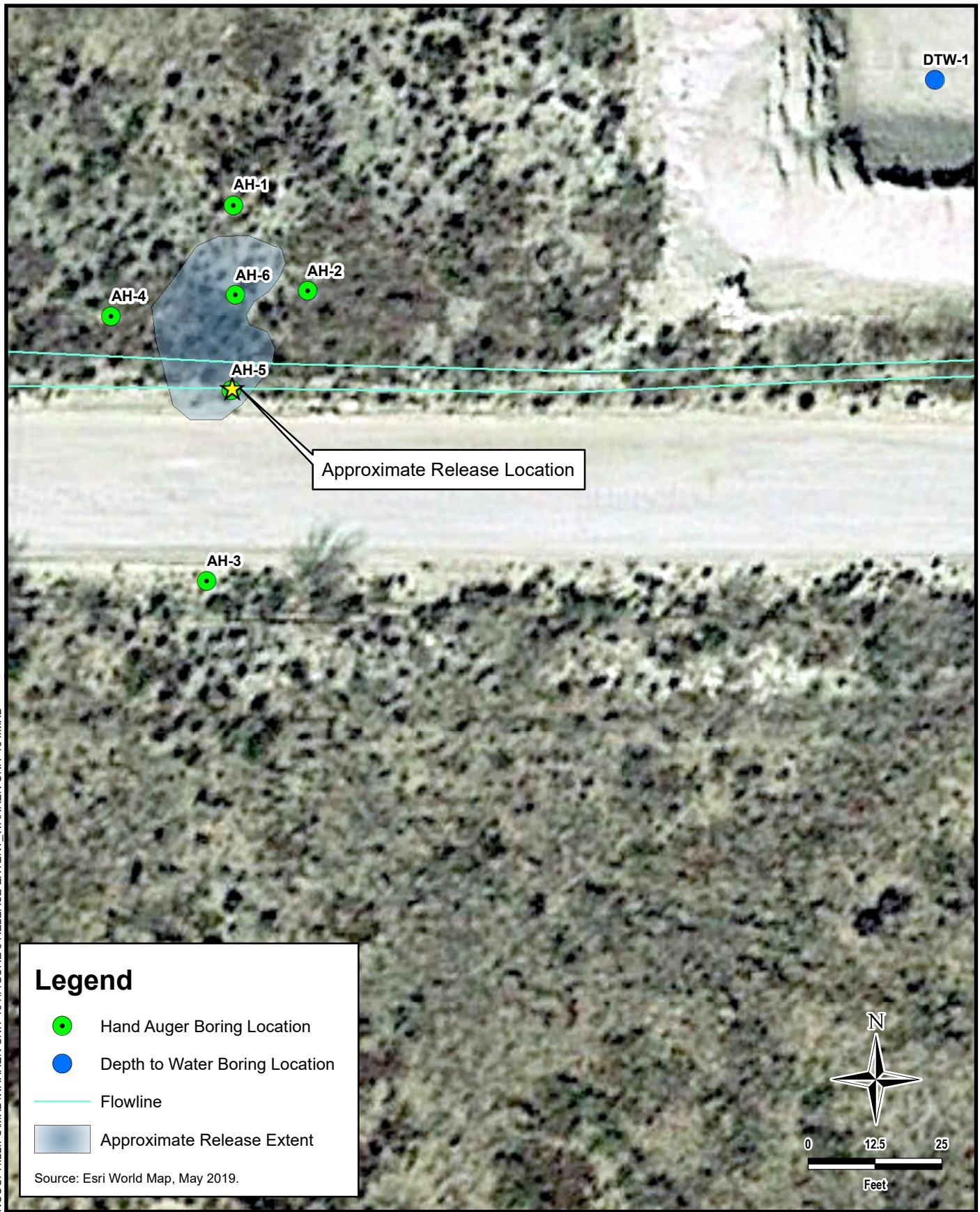
(32.542155°, -103.144711°)
LEA COUNTY, NEW MEXICO

WARREN UNIT 134 FLOWLINE RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-02377
DATE:	MAY 19, 2021
DESIGNED BY:	AAM

Figure No.
2



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\WARREN UNIT 134\FIGURE 3 RELEASE EXTENT_WARREN UNIT 134.MXD

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

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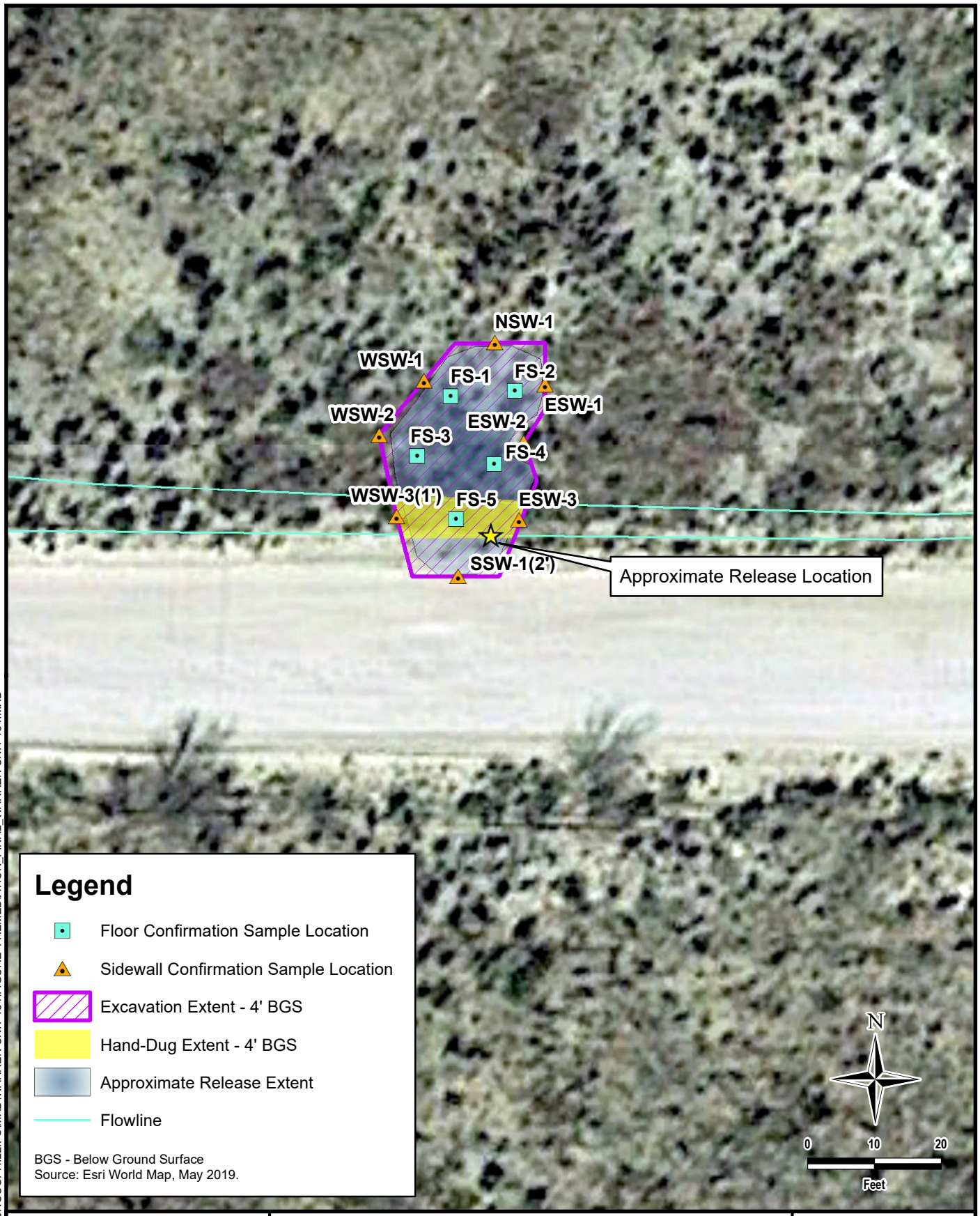
NAPP2107046560
(32.542155°, -103.144711°)
LEA COUNTY, NEW MEXICO

WARREN UNIT 134 FLOWLINE RELEASE
APPROXIMATE RELEASE EXTENT AND SITE ASSESSMENT

PROJECT NO.:	212C-MD-02377
DATE:	MAY 19, 2021
DESIGNED BY:	AAM

Figure No.
3



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\WARREN UNIT 134\FIGURE 4 REMEDIATION_FINAL_WARREN UNIT 134.MXD

TETRA TECH

www.tetratech.com

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

CONOCOPHILLIPS

NAPP2107046560
(32.542155°, -103.144711°)
LEA COUNTY, NEW MEXICO

WARREN UNIT 134 FLOWLINE RELEASE
REMEDIATION EXTENT AND CONFIRMATION SAMPLING LOCATIONS

PROJECT NO.:	212C-MD-02377
DATE:	SEPTEMBER 29, 2021
DESIGNED BY:	AAM

Figure No.
4

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT
CONOCOPHILLIPS
WARREN UNIT 134 FLOWLINE RELEASE
NAPP2107046560
LEA COUNTY, NM

Sample ID	Sample Date	Sampled Depth	Chloride[1]		BTEX[2]								TPH[3]							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO[4] C_6 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{36}		Total TPH
		ft. bgs	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
AH-1	3/18/2021	(0'-1')	16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0
AH-2	3/18/2021	(0'-1')	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0
AH-3	3/18/2021	(0'-1')	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0
AH-4	3/18/2021	(0'-1')	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0
AH-5	3/18/2021	(0'-1')	***3,160***		< 0.050		0.068		0.751		3.82		4.64		***357***		***20,300***		***4,330***		***24,987***
	3/18/2021	(1'-2')	***1,230***		< 0.050		0.050		0.102		0.242		0.394		< 10.0		***146***		***28.8***		***175***
	3/18/2021	(2'-3')	***1,320***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0
	3/18/2021	(3'-4')	***1,880***		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0
	3/18/2021	(4'-5')	2,440		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		14.4		< 10.0		14.4
	3/18/2021	(5'-6')	1,870		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		174		26.9		201
	3/18/2021	(6'-7')	1,100		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		35.7		< 10.0		< 10.0
	3/18/2021	(7'-8')	400		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		57.8		< 10.0		< 10.0
	3/18/2021	(8'-9')	544		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		113		17.3		130
	3/18/2021	(9'-10')	256		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		134		20.8		155
AH-6	3/18/2021	(0'-1')	***2,200***		2.27		***47.3***		***62.9***		***96.0***		***208***		***2,610***		***7,990***		***1,260***		***11,860***
	3/18/2021	(1'-2')	***672***		0.570		***15.9***		***25.6***		***41.1***		***83.2***		***1,410***		***5,360***		***837***		***7,607***
	3/18/2021	(2'-3')	***672***		0.365		***12.0***		***22.6***		***38.1***		***73.0***		***1,190***		***5,350***		***845***		***7,385***
	3/18/2021	(3'-4')	***752***		0.415		***15.1***		***31.4***		***53.5***		***100***		***1,480***		***6,820***		***1,150***		***9,450***
	3/18/2021	(4'-5')	48.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		84.2		12.1		96.3

NOTES:

Bold and italicized values indicate exceedance of Reclamation Requirements and/or proposed RRALs.

ft.	Feet
bgs	Below ground surface
ppm	Parts per million
mg/kg	Milligrams per kilogram
NS	Not sampled
TPH	Total Petroleum Hydrocarbons
GRO	Gasoline range organics
DRO	Diesel range organics
ORO	Oil range organics
1	Method SM4500Cl-B
2	EPA Method 8021M
3	EPA Method 8015M
4	EPA Method 8015D/GRO

QUALIFIERS:

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
CONFIRMATION SAMPLING
CONOCOPHILLIPS
WARREN UNIT 134 FLOWLINE RELEASE
NAPP2107046560
LEA COUNTY, NM

Sample ID	Sample Depth	Sample Date	Field Screening Results		Chloride[1]		BTEX[2]										TPH[3]							
							Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO C_6 - C_{10}		DRO C_{10} - C_{28}		ORO C_{28} - C_{36}		Total TPH	
			Chloride	PID																				
	ft. bgs		ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q
FS-1	4	9/8/2021	58.8	-	20.3		0.00279		< 0.00202		< 0.00202		< 0.00403		< 0.00403		< 50.0		< 50.0		< 50.0		< 50.0	
FS-2	4	9/8/2021	28.1	-	11.6		< 0.00200		< 0.00200		< 0.00200		< 0.00399		< 0.00399		< 50.0		< 50.0		< 50.0		< 50.0	
FS-3	4	9/8/2021	321	-	189		< 0.00198		< 0.00198		< 0.00198		< 0.00397		< 0.00397		< 49.8		202		< 49.8		202	
FS-4	4	9/8/2021	43.8	-	21.0		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00402		< 49.7		< 49.7		< 49.7		< 49.7	
FS-5	4	9/8/2021	190	-	90.7		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00402		< 49.8		< 49.8		< 49.8		< 49.8	
NSW-1	-	9/7/2021	41.7	-	22.1		< 0.00200		< 0.00200		< 0.00200		< 0.00401		< 0.00401		< 49.8		< 49.8		< 49.8		< 49.8	
ESW-1	-	9/7/2021	25.5	-	23.1		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00402		< 49.9		< 49.9		< 49.9		< 49.9	
ESW-2	-	9/7/2021	61.9	-	35.0		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00402		< 49.8		< 49.8		< 49.8		< 49.8	
ESW-3	-	9/7/2021	106	-	70.8		< 0.00199		< 0.00199		< 0.00199		< 0.00398		< 0.00398		< 49.9		< 49.9		< 49.9		< 49.9	
SSW-1	-	9/7/2021	111	-	56.0		< 0.00200		< 0.00200		< 0.00200		< 0.00399		< 0.00399		< 49.9		169		< 49.9		***169***	
SSW-1(1')	-	9/14/2021	26.2	-	10.7		< 0.00200		< 0.00200		< 0.00200		< 0.00400		< 0.00400		< 49.8		339		< 49.8		***339***	
SSW-1(2')	-	9/17/2021	65.1	-	57.3		< 0.00200		< 0.00200		< 0.00200		< 0.00399		< 0.00399		< 50.0		< 50.0		< 50.0		< 50.0	
WSW-1	-	9/7/2021	37.3	-	20.8		< 0.00200		< 0.00200		< 0.00200		< 0.00400		< 0.00400		< 49.8		< 49.8		< 49.8		< 49.8	
WSW-2	-	9/7/2021	71.9	-	32.5		< 0.00200		0.002		0.002		< 0.00401		< 0.00401		< 50.0		< 50.0		< 50.0		< 50.0	
WSW-3	-	9/7/2021	303	-	211		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00402		< 50.0		155		< 50.0		***155***	
WSW-3(1')	-	9/14/2021	22.5	-	14.3		< 0.00201		< 0.00201		< 0.00201		< 0.00402		< 0.00402		< 50.0		84.5		< 50.0		84.5	

NOTES:

ft.	Feet
bgs	Below ground surface
ppm	Parts per million
mg/kg	Milligrams per kilogram
TPH	Total Petroleum Hydrocarbons
GRO	Gasoline range organics
DRO	Diesel range organics
ORO	Oil range organics

Bold and italicized values indicate exceedance of Reclamation Requirements and/or proposed RRALs.

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

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

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

QUALIFIERS:

APPENDIX A
C-141 Forms

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District HI
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	NAPP2107046560
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party ConocoPhillips Company	OGRID 217817
Contact Name Kelsy Waggaman	Contact Telephone 505-577-9071
Contact email kelsy.waggaman@conocophillips.com	Incident # *(assigned by OCD)* *NAPP2107046560*
Contact mailing address 29 Vacuum Complex Lane, Lovington, NM 88260	

Location of Release Source

Latitude: 32.542158 Longitude: -103.144728
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Warren Unit 134 Flowline off-location	Site Type: Flowline - off location
Date Release Discovered 3/2/2021	API# *(if applicable): N/A*

Unit Letter	Section	Township	Range	County
L	27	20S	38E	Lea

Surface Owner: State X 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)

[X Crude Oil	Volume Released (bbls) 0.5 Barrels	Volume Recovered (bbls) 0
[X Produced Water	Volume Released (bbls) 6 BBls	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	X! 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 - Equipment Failure, Flowline Leak

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2107046560
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

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

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

Printed Name: __Kelsy Waggaman_____ Title: Environmental Coordinator

Signature: _____ Date: _3/11/21_____

email: __kelsy.waggaman@conocophillips.com_____Telephone: 505-577-9071_____

OCD Only

Received by: Cristina Eads Date: 03/11/2021

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2107046560
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?	>55' (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☑ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2107046560
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: Kelsy Waggaman Title: Environmental Coordinator

Signature: Date: 5/26/21

email: Kelsy.Waggaman@conocophillips.com Telephone: 505-577-9071

OCD Only

Received by: Ramona Marcus Date: 5/28/2021

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2107046560
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

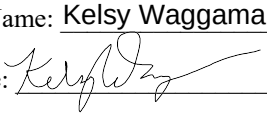
☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

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

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

Printed Name: Kelsy Waggaman Title: Environmental Coordinator

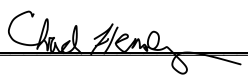
Signature:  Date: 5/26/21

email: kelsy.waggaman@conocophillips.com Telephone: 505-577-9071

OCD Only

Received by: Chad Hensley Date: 08/06/2021

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

Signature: Ramona Marcus  Date: 5/28/2021 08/06/2021

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

APPENDIX B
Site Characterization Data

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 674216 **Northing (Y):** 3602054.96 **Radius:** 800

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 674216 **Northing (Y):** 3602054.96 **Radius:** 1600

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
L 09918	L	LE		4	2	21	20S	38E	673954	3604063*	2025	135		
L 13546 POD1	L	LE	4	4	3	34	20S	38E	675011	3600037	2168	88		
L 07980	L	LE		4	3	26	20S	38E	676412	3601687*	2226	130	65	65

Average Depth to Water: **65 feet**

Minimum Depth: **65 feet**

Maximum Depth: **65 feet**

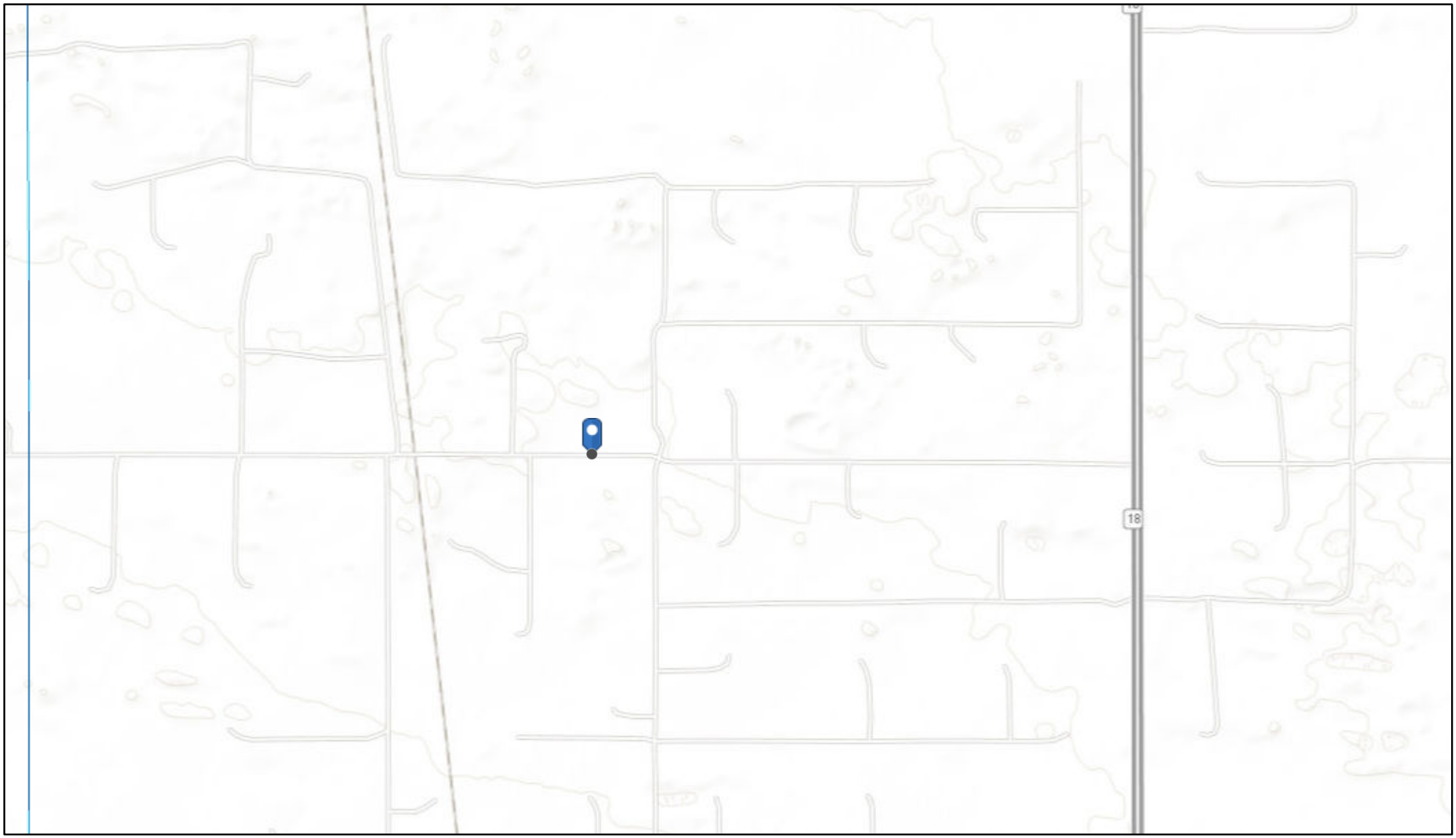
Record Count: 3

UTMNAD83 Radius Search (in meters):

Easting (X): 674216 **Northing (Y):** 3602054.96 **Radius:** 2500

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

OCD Hydrology - Warren Unit 134 Release



5/24/2021, 10:46:39 AM

OSE Water-bodies

PLJV Probable Playas

OSE Streams

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

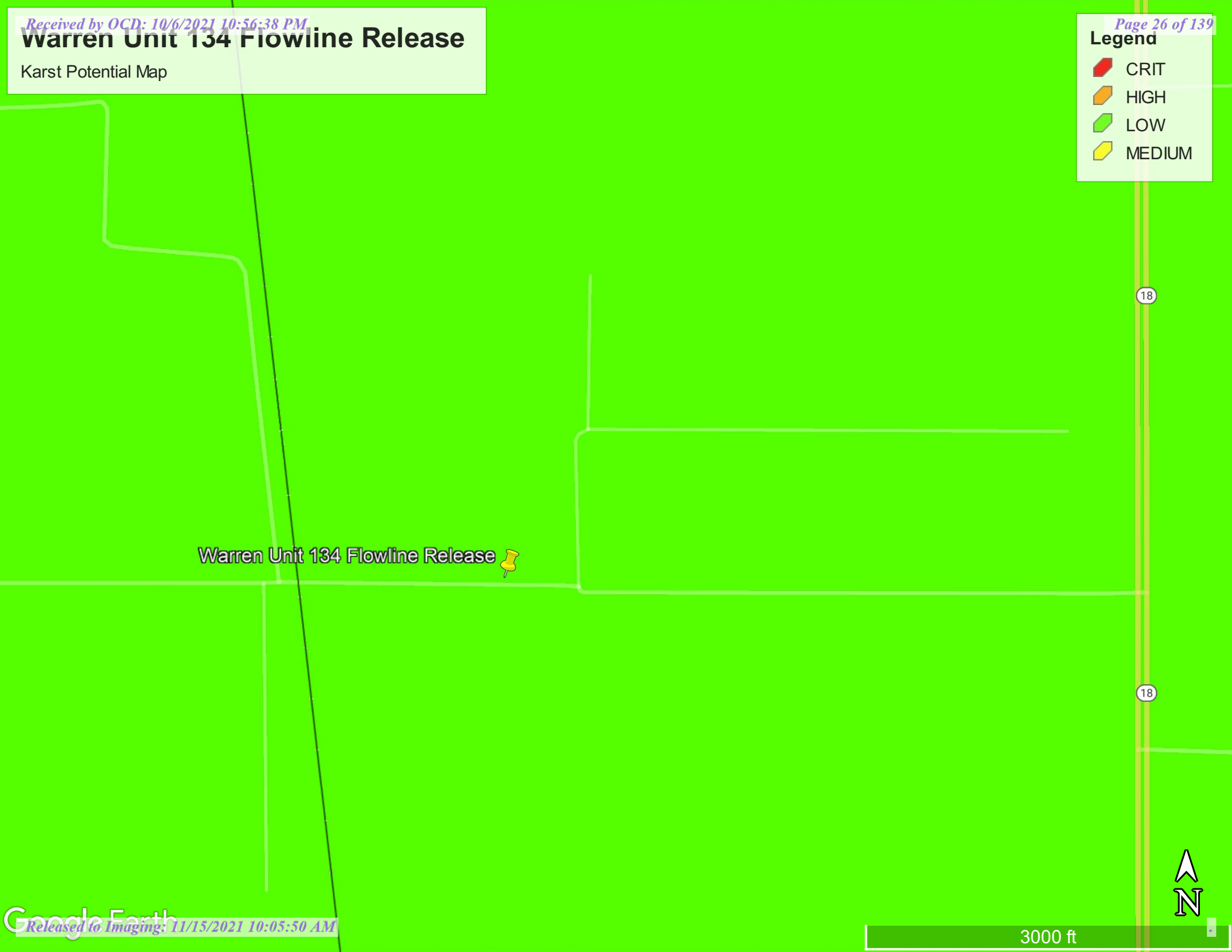
Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

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

Warren Unit 134 Flowline Release

Karst Potential Map



212C-MD-02377 | TETRA TECH | **LOG OF BORING DTW-1** | Page 1 of 2

Project Name: Warren Unit 134

Borehole Location: GPS: 32.542309°, -103.144283° | Surface Elevation: 3548'

Borehole Number: **DTW-1** | Borehole Diameter (in.): 8" | Date Started: 5/12/2021 | Date Finished: 5/12/2021

WATER LEVEL OBSERVATIONS

While Drilling ▽ Dry | 24 Hours After Completion of Drilling ▽ Dry

Remarks:

DEPTH (ft)	OPERATION TYPES	SAMPLE	CHLORIDE CONCENTRATION (ppm) ExStik	VOC CONCENTRATION (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	WELL DIAGRAM
5												**-SP-** SAND: Light brown, dry, loose, non-cemented, with no staining, with no odor.	5	
10												**-SC-** CLAYEY SAND: Light brown to reddish brown, dry, loose, non-cemented, with no staining, with no odor.		
15												**-SP-** SAND: Tan, dry, loose, non-cemented, with no staining, with no odor.	15	
20												**-SP-** SAND: Light tan, dry, loose, non-cemented, with no staining, with no odor.	20	
25												**-SP-** SAND: Reddish-brown, dry, loose, non-cemented, with no staining, with no odor.	25	
30													30	4" Schedule 40 PVC Casing

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

Operation Types: Hollow Stem Auger, Continuous Flight Auger, Mud Rotary, Auger, Air Rotary, Direct Push, Drive Casing

Notes:
Surface elevations are estimated from Google Earth data.

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling

212C-MD-02377 | TETRA TECH | **LOG OF BORING DTW-1** | Page 2 of 2

Project Name: Warren Unit 134

Borehole Location: GPS: 32.542309°, -103.144283° | Surface Elevation: 3548'

Borehole Number: **DTW-1** | Borehole Diameter (in.): 8" | Date Started: 5/12/2021 | Date Finished: 5/12/2021

WATER LEVEL OBSERVATIONS

While Drilling ▽ Dry | 24 Hours After Completion of Drilling ▽ Dry

Remarks:

DEPTH (ft)	OPERATION TYPES	SAMPLE	CHLORIDE CONCENTRATION (ppm) ExStik	VOC CONCENTRATION (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	WELL DIAGRAM
35												**-SM-** SILTY SAND: Reddish-brown, dry, loose, non-cemented, with no staining, with no odor.		
40														
45														0.010" Slotted Screen
50														
55													55	

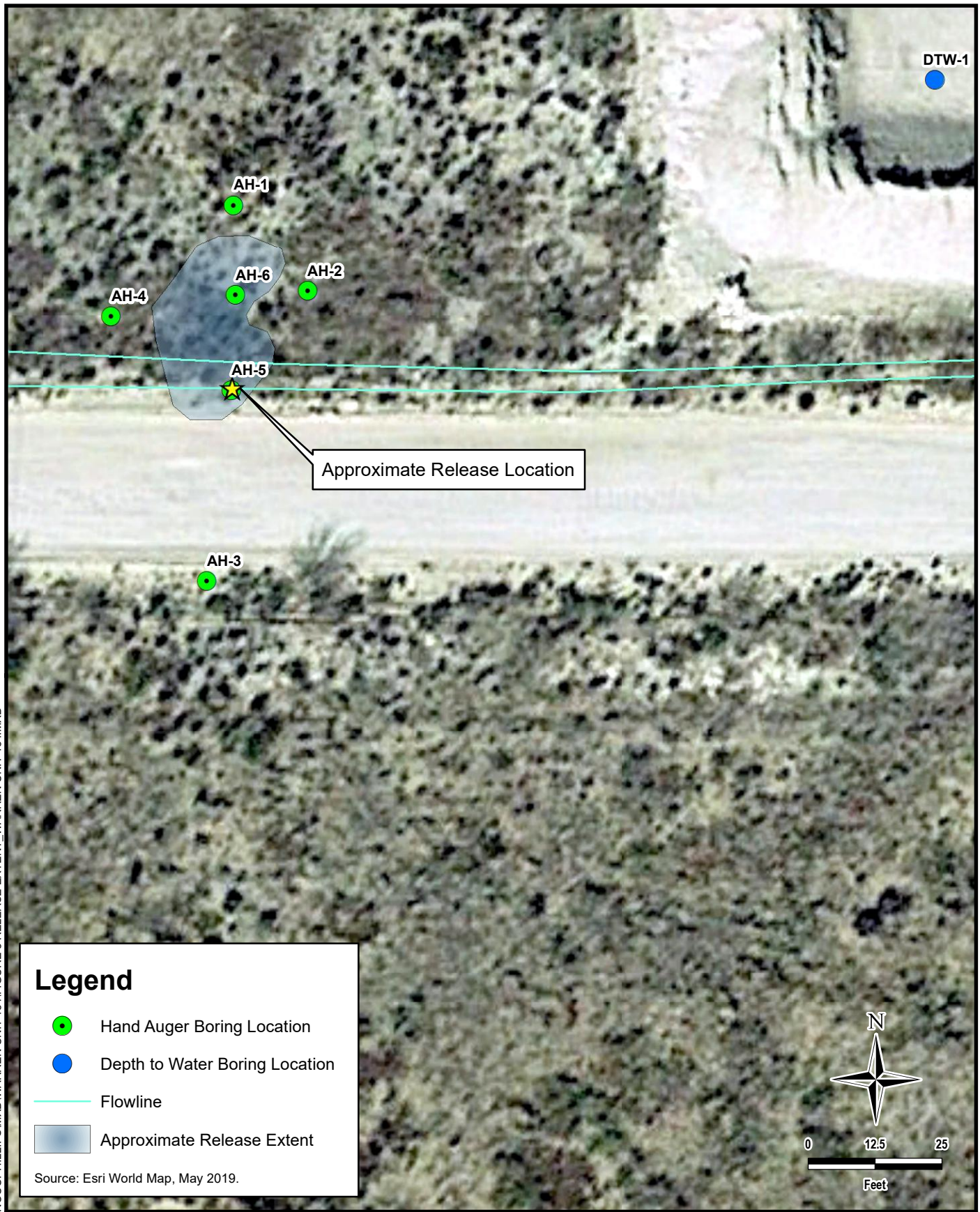
Bottom of borehole at 55.0 feet.

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

Operation Types: Auger, Hollow Stem Auger, Air Rotary, Continuous Flight Auger, Direct Push, Mud Rotary, Drive Casing

Notes:
Surface elevations are estimated from Google Earth data.

Logger: Adrian Garcia | Drilling Equipment: Air Rotary | Driller: Scarborough Drilling



DOCUMENT PATH: D:\CONOCOPHILLIPS\MXD\WARREN UNIT 134\FIGURE 3 RELEASE EXTENT_WARREN UNIT 134.MXD

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

CONOCOPHILLIPS

NAPP2107046560
(32.542155°, -103.144711°)
LEA COUNTY, NEW MEXICO

WARREN UNIT 134 FLOWLINE RELEASE
APPROXIMATE RELEASE EXTENT AND SITE ASSESSMENT

PROJECT NO.:	212C-MD-02377
DATE:	MAY 19, 2021
DESIGNED BY:	AAM

Figure No.
3

APPENDIX C
Laboratory Analytical Data

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-5858-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Warren Unit 134
Revision: 1

For:
Tetra Tech, Inc.
901 W Wall
Ste 100
Midland, Texas 79701

Attn: Joe Tyler

JKramer

Authorized for release by:
9/13/2021 8:01:19 AM

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

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Laboratory Job ID: 880-5858-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Qualifiers

GC 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.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Job ID: 880-5858-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-5858-1

REVISION

The report being provided is a revision of the original report sent on 9/10/2021. The report (revision 1) is being revised due to Project information incorrect on original report.

Report revision history

Receipt
The samples were received on 9/8/2021 12:44 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 3.5°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: NSW-1 (880-5858-1), ESW-1 (880-5858-2), ESW-2 (880-5858-3), ESW-3 (880-5858-4), WSW-1 (880-5858-6) and (880-5857-A-1-F). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-7654 and analytical batch 880-7637 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
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: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Client Sample ID: NSW-1

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-1

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		09/08/21 13:51	09/09/21 02:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 02:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 02:28	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/08/21 13:51	09/09/21 02:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 02:28	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/08/21 13:51	09/09/21 02:28	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		09/08/21 13:51	09/09/21 02:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*09/08/21 13:51*	*09/09/21 02:28*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*09/08/21 13:51*	*09/09/21 02:28*	*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		09/08/21 14:58	09/08/21 23:23	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/08/21 23:23	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/08/21 23:23	1
Total TPH	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/08/21 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*09/08/21 14:58*	*09/08/21 23:23*	*1*
o-Terphenyl	*112*		*70 - 130*	*09/08/21 14:58*	*09/08/21 23:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22.1**		5.00		mg/Kg			09/09/21 04:34	1

Client Sample ID: ESW-1

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-2

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		09/08/21 13:51	09/09/21 02:48	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/08/21 13:51	09/09/21 02:48	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/08/21 13:51	09/09/21 02:48	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/08/21 13:51	09/09/21 02:48	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/08/21 13:51	09/09/21 02:48	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/08/21 13:51	09/09/21 02:48	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		09/08/21 13:51	09/09/21 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*09/08/21 13:51*	*09/09/21 02:48*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*09/08/21 13:51*	*09/09/21 02:48*	*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		09/08/21 14:58	09/08/21 23:44	1

Eurofins Xenco, Midland

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Client Sample ID: ESW-1

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/08/21 14:58	09/08/21 23:44	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/08/21 14:58	09/08/21 23:44	1
Total TPH	<49.9	U	49.9		mg/Kg		09/08/21 14:58	09/08/21 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*09/08/21 14:58*	*09/08/21 23:44*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/08/21 14:58*	*09/08/21 23:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.1**		4.98		mg/Kg			09/09/21 04:51	1

Client Sample ID: ESW-2

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-3
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		09/08/21 13:51	09/09/21 03:08	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/08/21 13:51	09/09/21 03:08	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/08/21 13:51	09/09/21 03:08	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/08/21 13:51	09/09/21 03:08	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/08/21 13:51	09/09/21 03:08	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/08/21 13:51	09/09/21 03:08	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		09/08/21 13:51	09/09/21 03:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*09/08/21 13:51*	*09/09/21 03:08*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*09/08/21 13:51*	*09/09/21 03:08*	*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		09/08/21 14:58	09/09/21 00:05	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/09/21 00:05	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/09/21 00:05	1
Total TPH	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/09/21 00:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*09/08/21 14:58*	*09/09/21 00:05*	*1*
o-Terphenyl	*100*		*70 - 130*	*09/08/21 14:58*	*09/09/21 00:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**35.0**		4.95		mg/Kg			09/09/21 04:56	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Client Sample ID: ESW-3

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-4

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/08/21 13:51	09/09/21 03:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/08/21 13:51	09/09/21 03:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/08/21 13:51	09/09/21 03:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/08/21 13:51	09/09/21 03:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/08/21 13:51	09/09/21 03:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/08/21 13:51	09/09/21 03:29	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		09/08/21 13:51	09/09/21 03:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*09/08/21 13:51*	*09/09/21 03:29*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*09/08/21 13:51*	*09/09/21 03:29*	*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		09/08/21 14:58	09/09/21 00:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/08/21 14:58	09/09/21 00:26	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/08/21 14:58	09/09/21 00:26	1
Total TPH	<49.9	U	49.9		mg/Kg		09/08/21 14:58	09/09/21 00:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*09/08/21 14:58*	*09/09/21 00:26*	*1*
o-Terphenyl	*107*		*70 - 130*	*09/08/21 14:58*	*09/09/21 00:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**70.8**		4.96		mg/Kg			09/09/21 05:02	1

Client Sample ID: SSW-1

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-5

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 03:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 03:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 03:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/08/21 13:51	09/09/21 03:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 03:49	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/08/21 13:51	09/09/21 03:49	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		09/08/21 13:51	09/09/21 03:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*09/08/21 13:51*	*09/09/21 03:49*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*09/08/21 13:51*	*09/09/21 03:49*	*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		09/08/21 14:58	09/09/21 03:32	1

Eurofins Xenco, Midland

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Client Sample ID: SSW-1

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**169**		49.9		mg/Kg		09/08/21 14:58	09/09/21 03:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/08/21 14:58	09/09/21 03:32	1
Total TPH	**169**		49.9		mg/Kg		09/08/21 14:58	09/09/21 03:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/08/21 14:58*	*09/09/21 03:32*	*1*
o-Terphenyl	*110*		*70 - 130*	*09/08/21 14:58*	*09/09/21 03:32*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**56.0**		5.00		mg/Kg			09/09/21 05:07	1

Client Sample ID: WSW-1

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-6
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		09/08/21 13:51	09/09/21 04:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 04:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 04:10	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/08/21 13:51	09/09/21 04:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 04:10	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/08/21 13:51	09/09/21 04:10	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/08/21 13:51	09/09/21 04:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*	*09/08/21 13:51*	*09/09/21 04:10*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*09/08/21 13:51*	*09/09/21 04:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/09/21 00:46	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/09/21 00:46	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/09/21 00:46	1
Total TPH	<49.8	U	49.8		mg/Kg		09/08/21 14:58	09/09/21 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*09/08/21 14:58*	*09/09/21 00:46*	*1*
o-Terphenyl	*103*		*70 - 130*	*09/08/21 14:58*	*09/09/21 00:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.8**		5.04		mg/Kg			09/09/21 05:13	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Client Sample ID: WSW-2

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-7
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		09/08/21 13:51	09/10/21 13:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/10/21 13:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/10/21 13:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/08/21 13:51	09/10/21 13:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/10/21 13:47	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/08/21 13:51	09/10/21 13:47	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		09/08/21 13:51	09/10/21 13:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/08/21 13:51*	*09/10/21 13:47*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*09/08/21 13:51*	*09/10/21 13:47*	*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		09/08/21 14:58	09/09/21 01:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/08/21 14:58	09/09/21 01:07	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/08/21 14:58	09/09/21 01:07	1
Total TPH	<50.0	U	50.0		mg/Kg		09/08/21 14:58	09/09/21 01:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*09/08/21 14:58*	*09/09/21 01:07*	*1*
o-Terphenyl	*96*		*70 - 130*	*09/08/21 14:58*	*09/09/21 01:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.5**		4.98		mg/Kg			09/09/21 05:19	1

Client Sample ID: WSW-3

Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-8
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		09/08/21 13:51	09/10/21 14:07	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/08/21 13:51	09/10/21 14:07	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/08/21 13:51	09/10/21 14:07	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/08/21 13:51	09/10/21 14:07	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/08/21 13:51	09/10/21 14:07	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/08/21 13:51	09/10/21 14:07	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		09/08/21 13:51	09/10/21 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*09/08/21 13:51*	*09/10/21 14:07*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*09/08/21 13:51*	*09/10/21 14:07*	*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		09/08/21 14:58	09/09/21 03:53	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Client Sample ID: WSW-3
Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**155**		50.0		mg/Kg		09/08/21 14:58	09/09/21 03:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/08/21 14:58	09/09/21 03:53	1
Total TPH	**155**		50.0		mg/Kg		09/08/21 14:58	09/09/21 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*09/08/21 14:58*	*09/09/21 03:53*	*1*
o-Terphenyl	*109*		*70 - 130*	*09/08/21 14:58*	*09/09/21 03:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**211**		5.05		mg/Kg			09/09/21 05:35	1

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
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)
880-5857-A-1-D MS	Matrix Spike	129	104
880-5857-A-1-E MSD	Matrix Spike Duplicate	125	106
880-5858-1	NSW-1	141 S1+	69 S1-
880-5858-2	ESW-1	132 S1+	95
880-5858-3	ESW-2	137 S1+	99
880-5858-4	ESW-3	131 S1+	93
880-5858-5	SSW-1	130	99
880-5858-6	WSW-1	138 S1+	95
880-5858-7	WSW-2	105	99
880-5858-8	WSW-3	100	103
880-5918-A-1-A MS	Matrix Spike	213 S1+	149 S1+
880-5918-A-1-B MSD	Matrix Spike Duplicate	119	87
LCS 880-7654/1-A	Lab Control Sample	119	95
LCS 880-7706/1-A	Lab Control Sample	138 S1+	109
LCSD 880-7654/2-A	Lab Control Sample Dup	116	104
LCSD 880-7706/2-A	Lab Control Sample Dup	98	93
MB 880-7636/5-A	Method Blank	105	98
MB 880-7654/5-A	Method Blank	102	96
MB 880-7696/5-A	Method Blank	128	100
MB 880-7706/5-A	Method Blank	164 S1+	107

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)
880-5857-A-1-H MS	Matrix Spike	92	94
880-5857-A-1-I MSD	Matrix Spike Duplicate	94	96
880-5858-1	NSW-1	100	112
880-5858-2	ESW-1	104	109
880-5858-3	ESW-2	95	100
880-5858-4	ESW-3	97	107
880-5858-5	SSW-1	102	110
880-5858-6	WSW-1	98	103
880-5858-7	WSW-2	93	96
880-5858-8	WSW-3	100	109
LCS 880-7663/2-A	Lab Control Sample	102	111
LCSD 880-7663/3-A	Lab Control Sample Dup	96	104
MB 880-7663/1-A	Method Blank	94	110

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-7636/5-A
Matrix: Solid
Analysis Batch: 7637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7636

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/21 09:25	09/08/21 12:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/21 09:25	09/08/21 12:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/21 09:25	09/08/21 12:29	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/08/21 09:25	09/08/21 12:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/21 09:25	09/08/21 12:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/08/21 09:25	09/08/21 12:29	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/08/21 09:25	09/08/21 12:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*09/08/21 09:25*	*09/08/21 12:29*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/08/21 09:25*	*09/08/21 12:29*	*1*

Lab Sample ID: MB 880-7654/5-A
Matrix: Solid
Analysis Batch: 7637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7654

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 00:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 00:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 00:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/08/21 13:51	09/09/21 00:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/08/21 13:51	09/09/21 00:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/08/21 13:51	09/09/21 00:44	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/08/21 13:51	09/09/21 00:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*09/08/21 13:51*	*09/09/21 00:44*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*09/08/21 13:51*	*09/09/21 00:44*	*1*

Lab Sample ID: LCS 880-7654/1-A
Matrix: Solid
Analysis Batch: 7637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09356		mg/Kg		94	70 - 130
Toluene	0.100	0.08792		mg/Kg		88	70 - 130
Ethylbenzene	0.100	0.08806		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.1859		mg/Kg		93	70 - 130
o-Xylene	0.100	0.09439		mg/Kg		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

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

Lab Sample ID: LCSD 880-7654/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 7637 — **Prep Batch: 7654**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08448		mg/Kg		84	70 - 130	10	35
Toluene			0.100	0.07939		mg/Kg		79	70 - 130	10	35
Ethylbenzene			0.100	0.07994		mg/Kg		80	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.1690		mg/Kg		85	70 - 130	10	35
o-Xylene			0.100	0.08583		mg/Kg		86	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-5857-A-1-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 7637 — **Prep Batch: 7654**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00201	U	0.0998	0.09201		mg/Kg		92	70 - 130
Toluene	<0.00201	U	0.0998	0.08237		mg/Kg		83	70 - 130
Ethylbenzene	<0.00201	U	0.0998	0.08463		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1778		mg/Kg		89	70 - 130
o-Xylene	<0.00201	U F1 F2	0.0998	0.08970		mg/Kg		90	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-5857-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 7637 — **Prep Batch: 7654**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.101	0.09092		mg/Kg		90	70 - 130	1	35
Toluene	<0.00201	U	0.101	0.08350		mg/Kg		83	70 - 130	1	35
Ethylbenzene	<0.00201	U	0.101	0.08311		mg/Kg		82	70 - 130	2	35
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1718		mg/Kg		85	70 - 130	3	35
o-Xylene	<0.00201	U F1 F2	0.101	0.03857	F1 F2	mg/Kg		38	70 - 130	80	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: MB 880-7696/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 7711 — **Prep Batch: 7696**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/09/21 11:55	09/09/21 19:26	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-7696/5-A
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7696

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		09/09/21 11:55	09/09/21 19:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*09/09/21 11:55*	*09/09/21 19:26*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*09/09/21 11:55*	*09/09/21 19:26*	*1*

Lab Sample ID: MB 880-7706/5-A
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		09/09/21 13:47	09/10/21 07:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*164*	*S1+*	*70 - 130*	*09/09/21 13:47*	*09/10/21 07:00*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*09/09/21 13:47*	*09/10/21 07:00*	*1*

Lab Sample ID: LCS 880-7706/1-A
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07809		mg/Kg		78	70 - 130
Toluene	0.100	0.1023		mg/Kg		102	70 - 130
Ethylbenzene	0.100	0.09775		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	0.200	0.2004		mg/Kg		100	70 - 130
o-Xylene	0.100	0.1084		mg/Kg		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-7706/2-A
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7706

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08162		mg/Kg		82	70 - 130	4	35
Toluene	0.100	0.09562		mg/Kg		96	70 - 130	7	35

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

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

Lab Sample ID: LCSD 880-7706/2-A
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7706

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.1004		mg/Kg		100	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1874		mg/Kg		94	70 - 130	7	35
o-Xylene			0.100	0.09278		mg/Kg		93	70 - 130	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 880-5918-A-1-A MS
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1	0.0998	0.03919	F1	mg/Kg		39	70 - 130
Toluene	<0.00200	U F2 F1	0.0998	0.07828		mg/Kg		78	70 - 130
Ethylbenzene	<0.00200	U F2 F1	0.0998	0.09466		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.200	0.1257	F1	mg/Kg		63	70 - 130
o-Xylene	<0.00200	U F2 F1	0.0998	0.06365	F1	mg/Kg		63	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*213*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*149*	*S1+*	*70 - 130*

Lab Sample ID: 880-5918-A-1-B MSD
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 7706

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	0.03636	F1	mg/Kg		37	70 - 130	7	35
Toluene	<0.00200	U F2 F1	0.0996	0.04681	F2 F1	mg/Kg		47	70 - 130	50	35
Ethylbenzene	<0.00200	U F2 F1	0.0996	0.05308	F2 F1	mg/Kg		53	70 - 130	56	35
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.199	0.07218	F2 F1	mg/Kg		36	70 - 130	54	35
o-Xylene	<0.00200	U F2 F1	0.0996	0.04038	F2 F1	mg/Kg		40	70 - 130	45	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

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

Lab Sample ID: MB 880-7663/1-A
Matrix: Solid
Analysis Batch: 7628

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7663

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		09/08/21 14:58	09/08/21 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/08/21 14:58	09/08/21 20:13	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

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

Lab Sample ID: MB 880-7663/1-A
Matrix: Solid
Analysis Batch: 7628

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7663

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/08/21 14:58	09/08/21 20:13	1
Total TPH	<50.0	U	50.0		mg/Kg		09/08/21 14:58	09/08/21 20:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*09/08/21 14:58*	*09/08/21 20:13*	*1*
o-Terphenyl	*110*		*70 - 130*	*09/08/21 14:58*	*09/08/21 20:13*	*1*

Lab Sample ID: LCS 880-7663/2-A
Matrix: Solid
Analysis Batch: 7628

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7663

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	883.3		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	970.5		mg/Kg		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*111*		*70 - 130*

Lab Sample ID: LCSD 880-7663/3-A
Matrix: Solid
Analysis Batch: 7628

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7663

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	794.2		mg/Kg		79	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	911.3		mg/Kg		91	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: 880-5857-A-1-H MS
Matrix: Solid
Analysis Batch: 7628

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7663

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	995	772.6		mg/Kg		78	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	995	861.4		mg/Kg		87	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

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

Lab Sample ID: 880-5857-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 7628 — **Prep Batch: 7663**

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	998	810.7		mg/Kg		81	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	902.4		mg/Kg		90	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*96*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-7653/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7673

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/09/21 03:43	1

Lab Sample ID: LCS 880-7653/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7673

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	259.9		mg/Kg		104	90 - 110

Lab Sample ID: LCSD 880-7653/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7673

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	260.6		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 880-5858-7 MS — **Client Sample ID: WSW-2**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7673

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	32.5		249	285.1		mg/Kg		101	90 - 110

Lab Sample ID: 880-5858-7 MSD — **Client Sample ID: WSW-2**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7673

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	32.5		249	287.0		mg/Kg		102	90 - 110	1	20

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

GC VOA

Prep Batch: 7636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7636/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 7637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5858-1	NSW-1	Total/NA	Solid	8021B	7654
880-5858-2	ESW-1	Total/NA	Solid	8021B	7654
880-5858-3	ESW-2	Total/NA	Solid	8021B	7654
880-5858-4	ESW-3	Total/NA	Solid	8021B	7654
880-5858-5	SSW-1	Total/NA	Solid	8021B	7654
880-5858-6	WSW-1	Total/NA	Solid	8021B	7654
MB 880-7636/5-A	Method Blank	Total/NA	Solid	8021B	7636
MB 880-7654/5-A	Method Blank	Total/NA	Solid	8021B	7654
LCS 880-7654/1-A	Lab Control Sample	Total/NA	Solid	8021B	7654
LCSD 880-7654/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7654
880-5857-A-1-D MS	Matrix Spike	Total/NA	Solid	8021B	7654
880-5857-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7654

Prep Batch: 7654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5858-1	NSW-1	Total/NA	Solid	5035	
880-5858-2	ESW-1	Total/NA	Solid	5035	
880-5858-3	ESW-2	Total/NA	Solid	5035	
880-5858-4	ESW-3	Total/NA	Solid	5035	
880-5858-5	SSW-1	Total/NA	Solid	5035	
880-5858-6	WSW-1	Total/NA	Solid	5035	
880-5858-7	WSW-2	Total/NA	Solid	5035	
880-5858-8	WSW-3	Total/NA	Solid	5035	
MB 880-7654/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7654/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7654/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5857-A-1-D MS	Matrix Spike	Total/NA	Solid	5035	
880-5857-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 7696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7696/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 7706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7706/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7706/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7706/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5918-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-5918-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 7711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5858-7	WSW-2	Total/NA	Solid	8021B	7654
880-5858-8	WSW-3	Total/NA	Solid	8021B	7654
MB 880-7696/5-A	Method Blank	Total/NA	Solid	8021B	7696
MB 880-7706/5-A	Method Blank	Total/NA	Solid	8021B	7706

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

GC VOA (Continued)

Analysis Batch: 7711 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-7706/1-A	Lab Control Sample	Total/NA	Solid	8021B	7706
LCSD 880-7706/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7706
880-5918-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	7706
880-5918-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7706

GC Semi VOA

Analysis Batch: 7628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5858-1	NSW-1	Total/NA	Solid	8015B NM	7663
880-5858-2	ESW-1	Total/NA	Solid	8015B NM	7663
880-5858-3	ESW-2	Total/NA	Solid	8015B NM	7663
880-5858-4	ESW-3	Total/NA	Solid	8015B NM	7663
880-5858-5	SSW-1	Total/NA	Solid	8015B NM	7663
880-5858-6	WSW-1	Total/NA	Solid	8015B NM	7663
880-5858-7	WSW-2	Total/NA	Solid	8015B NM	7663
880-5858-8	WSW-3	Total/NA	Solid	8015B NM	7663
MB 880-7663/1-A	Method Blank	Total/NA	Solid	8015B NM	7663
LCS 880-7663/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	7663
LCSD 880-7663/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	7663
880-5857-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	7663
880-5857-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	7663

Prep Batch: 7663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5858-1	NSW-1	Total/NA	Solid	8015NM Prep	
880-5858-2	ESW-1	Total/NA	Solid	8015NM Prep	
880-5858-3	ESW-2	Total/NA	Solid	8015NM Prep	
880-5858-4	ESW-3	Total/NA	Solid	8015NM Prep	
880-5858-5	SSW-1	Total/NA	Solid	8015NM Prep	
880-5858-6	WSW-1	Total/NA	Solid	8015NM Prep	
880-5858-7	WSW-2	Total/NA	Solid	8015NM Prep	
880-5858-8	WSW-3	Total/NA	Solid	8015NM Prep	
MB 880-7663/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-7663/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-7663/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-5857-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-5857-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 7653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5858-1	NSW-1	Soluble	Solid	DI Leach	
880-5858-2	ESW-1	Soluble	Solid	DI Leach	
880-5858-3	ESW-2	Soluble	Solid	DI Leach	
880-5858-4	ESW-3	Soluble	Solid	DI Leach	
880-5858-5	SSW-1	Soluble	Solid	DI Leach	
880-5858-6	WSW-1	Soluble	Solid	DI Leach	
880-5858-7	WSW-2	Soluble	Solid	DI Leach	
880-5858-8	WSW-3	Soluble	Solid	DI Leach	
MB 880-7653/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

HPLC/IC (Continued)

Leach Batch: 7653 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-7653/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-7653/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-5858-7 MS	WSW-2	Soluble	Solid	DI Leach	
880-5858-7 MSD	WSW-2	Soluble	Solid	DI Leach	

Analysis Batch: 7673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5858-1	NSW-1	Soluble	Solid	300.0	7653
880-5858-2	ESW-1	Soluble	Solid	300.0	7653
880-5858-3	ESW-2	Soluble	Solid	300.0	7653
880-5858-4	ESW-3	Soluble	Solid	300.0	7653
880-5858-5	SSW-1	Soluble	Solid	300.0	7653
880-5858-6	WSW-1	Soluble	Solid	300.0	7653
880-5858-7	WSW-2	Soluble	Solid	300.0	7653
880-5858-8	WSW-3	Soluble	Solid	300.0	7653
MB 880-7653/1-A	Method Blank	Soluble	Solid	300.0	7653
LCS 880-7653/2-A	Lab Control Sample	Soluble	Solid	300.0	7653
LCSD 880-7653/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	7653
880-5858-7 MS	WSW-2	Soluble	Solid	300.0	7653
880-5858-7 MSD	WSW-2	Soluble	Solid	300.0	7653

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Client Sample ID: NSW-1
Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	7654	09/08/21 13:51	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7637	09/09/21 02:28	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	7663	09/08/21 14:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7628	09/08/21 23:23	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	7653	09/08/21 13:49	SC	XEN MID
Soluble	Analysis	300.0		1			7673	09/09/21 04:34	SC	XEN MID

Client Sample ID: ESW-1
Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	7654	09/08/21 13:51	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7637	09/09/21 02:48	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	7663	09/08/21 14:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7628	09/08/21 23:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	7653	09/08/21 13:49	SC	XEN MID
Soluble	Analysis	300.0		1			7673	09/09/21 04:51	SC	XEN MID

Client Sample ID: ESW-2
Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	7654	09/08/21 13:51	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7637	09/09/21 03:08	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	7663	09/08/21 14:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7628	09/09/21 00:05	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	7653	09/08/21 13:49	SC	XEN MID
Soluble	Analysis	300.0		1			7673	09/09/21 04:56	SC	XEN MID

Client Sample ID: ESW-3
Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	7654	09/08/21 13:51	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7637	09/09/21 03:29	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	7663	09/08/21 14:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7628	09/09/21 00:26	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	7653	09/08/21 13:49	SC	XEN MID
Soluble	Analysis	300.0		1			7673	09/09/21 05:02	SC	XEN MID

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Client Sample ID: SSW-1
Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	7654	09/08/21 13:51	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7637	09/09/21 03:49	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	7663	09/08/21 14:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7628	09/09/21 03:32	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	7653	09/08/21 13:49	SC	XEN MID
Soluble	Analysis	300.0		1			7673	09/09/21 05:07	SC	XEN MID

Client Sample ID: WSW-1
Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	7654	09/08/21 13:51	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7637	09/09/21 04:10	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	7663	09/08/21 14:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7628	09/09/21 00:46	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	7653	09/08/21 13:49	SC	XEN MID
Soluble	Analysis	300.0		1			7673	09/09/21 05:13	SC	XEN MID

Client Sample ID: WSW-2
Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	7654	09/08/21 13:51	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7711	09/10/21 13:47	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	7663	09/08/21 14:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7628	09/09/21 01:07	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	7653	09/08/21 13:49	SC	XEN MID
Soluble	Analysis	300.0		1			7673	09/09/21 05:19	SC	XEN MID

Client Sample ID: WSW-3
Date Collected: 09/07/21 00:00
Date Received: 09/08/21 12:44

Lab Sample ID: 880-5858-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	7654	09/08/21 13:51	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7711	09/10/21 14:07	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	7663	09/08/21 14:58	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7628	09/09/21 03:53	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	7653	09/08/21 13:49	SC	XEN MID
Soluble	Analysis	300.0		1			7673	09/09/21 05:35	SC	XEN MID

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

Accreditation/Certification Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-5858-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-5858-1	NSW-1	Solid	09/07/21 00:00	09/08/21 12:44
880-5858-2	ESW-1	Solid	09/07/21 00:00	09/08/21 12:44
880-5858-3	ESW-2	Solid	09/07/21 00:00	09/08/21 12:44
880-5858-4	ESW-3	Solid	09/07/21 00:00	09/08/21 12:44
880-5858-5	SSW-1	Solid	09/07/21 00:00	09/08/21 12:44
880-5858-6	WSW-1	Solid	09/07/21 00:00	09/08/21 12:44
880-5858-7	WSW-2	Solid	09/07/21 00:00	09/08/21 12:44
880-5858-8	WSW-3	Solid	09/07/21 00:00	09/08/21 12:44

Analysis Request of Chain of Custody Record

880-5858 Chain of Custody

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5858

9/13/2021 (Rev. 1)

Tetra Tech, Inc.

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

Client Name	ConocoPhillips	Site Manager.	Joe Tyler
Project Name	Warren Unit 134	Contact Info	Email joe.tyler@tetratech.com Phone (432) 210-6952
Project Location (County, State)	Lea County, New Mexico	Project #:	212C-MD-02377
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland Texas 79701		
Receiving Laboratory	Xenco	Sampler Signature	Devin
Comments:			

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR 2021 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol 8260B / 624	GC/MS Semi Vol 8270C/625	PCB s 8082 / 608	NORM	PLM (Asbestos)	Chloride 300 0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R
	NSW-1	9.7.21			X			X		1	N	X		X											X				
	ESW-1	↓			↓			↓		↓	↓	↓		↓											↓				
	ESW-2																												
	ESW-3																												
	SSW-1																												
	WSW-1																												
	WSW-2																												
	WSW-3	↓			↓			↓		↓	↓	↓		↓											↓				

Relinquished by	Date	Time	Received by	Date	Time
	9.8.21	1244		9.8.21	1244
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time

ORIGINAL COPY

LAB USE ONLY

Sample Temperature
3.0/3.5
+0.5

REMARKS:

- ☐ Standard
- ☑ RUSH Same Day (24 hr) 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 880-5858-1
SDG Number: Lea County NM

Login Number: 5858
List Number: 1
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	No time on COC or sample containers
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-5919-1
Laboratory Sample Delivery Group: Lea County NM
Client Project/Site: Warren Unit 134 Flowline Release Remediation

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

Attn: Christian Llull

JKramer

Authorized for release by:
9/10/2021 2:10:41 PM

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

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release Remediation

Laboratory Job ID: 880-5919-1
SDG: Lea County NM

Table of Contents

Definitions/Glossary

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

Qualifiers

GC 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, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
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: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

Job ID: 880-5919-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-5919-1

Receipt
The samples were received on 9/9/2021 12:45 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 6.0°C

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-7706 and analytical batch 880-7711 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
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 for preparation batch 880-7707 and analytical batch 880-7720 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Client Sample Results

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

Client Sample ID: FS-1 Lab Sample ID: 880-5919-1

Date Collected: 09/08/21 14:50 **Matrix: Solid**
Date Received: 09/09/21 12:45

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00279**		0.00202		mg/Kg		09/09/21 13:47	09/10/21 08:29	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/09/21 13:47	09/10/21 08:29	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/09/21 13:47	09/10/21 08:29	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		09/09/21 13:47	09/10/21 08:29	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/09/21 13:47	09/10/21 08:29	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		09/09/21 13:47	09/10/21 08:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*09/09/21 13:47*	*09/10/21 08:29*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/09/21 13:47*	*09/10/21 08:29*	*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		09/09/21 13:32	09/10/21 04:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/09/21 13:32	09/10/21 04:14	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/09/21 13:32	09/10/21 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*09/09/21 13:32*	*09/10/21 04:14*	*1*
o-Terphenyl	*116*		*70 - 130*	*09/09/21 13:32*	*09/10/21 04:14*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.3**		5.00		mg/Kg			09/10/21 08:20	1

Client Sample ID: FS-2 Lab Sample ID: 880-5919-2

Date Collected: 09/08/21 14:55 **Matrix: Solid**
Date Received: 09/09/21 12:45

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		09/09/21 13:47	09/10/21 08:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/09/21 13:47	09/10/21 08:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/09/21 13:47	09/10/21 08:50	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/09/21 13:47	09/10/21 08:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/09/21 13:47	09/10/21 08:50	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/09/21 13:47	09/10/21 08:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*09/09/21 13:47*	*09/10/21 08:50*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*09/09/21 13:47*	*09/10/21 08:50*	*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		09/09/21 13:32	09/10/21 04:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/09/21 13:32	09/10/21 04:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/09/21 13:32	09/10/21 04:35	1

Eurofins Xenco, Midland

Client Sample Results

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

Client Sample ID: FS-2 Lab Sample ID: 880-5919-2

Date Collected: 09/08/21 14:55 **Matrix: Solid**
Date Received: 09/09/21 12:45

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*09/09/21 13:32*	*09/10/21 04:35*	*1*
o-Terphenyl	*106*		*70 - 130*	*09/09/21 13:32*	*09/10/21 04:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11.6**		4.97		mg/Kg			09/10/21 08:26	1

Client Sample ID: FS-3 Lab Sample ID: 880-5919-3

Date Collected: 09/08/21 13:45 **Matrix: Solid**
Date Received: 09/09/21 12:45

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		09/09/21 13:47	09/10/21 09:10	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 09:10	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 09:10	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		09/09/21 13:47	09/10/21 09:10	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 09:10	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		09/09/21 13:47	09/10/21 09:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*09/09/21 13:47*	*09/10/21 09:10*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*09/09/21 13:47*	*09/10/21 09:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/09/21 13:32	09/10/21 04:55	1
Diesel Range Organics (Over C10-C28)	**202**		49.8		mg/Kg		09/09/21 13:32	09/10/21 04:55	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/09/21 13:32	09/10/21 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*09/09/21 13:32*	*09/10/21 04:55*	*1*
o-Terphenyl	*111*		*70 - 130*	*09/09/21 13:32*	*09/10/21 04:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**189**		4.96		mg/Kg			09/10/21 08:43	1

Client Sample ID: FS-4 Lab Sample ID: 880-5919-4

Date Collected: 09/08/21 13:55 **Matrix: Solid**
Date Received: 09/09/21 12:45

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		09/09/21 13:47	09/10/21 09:31	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/09/21 13:47	09/10/21 09:31	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/09/21 13:47	09/10/21 09:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/09/21 13:47	09/10/21 09:31	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/09/21 13:47	09/10/21 09:31	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/09/21 13:47	09/10/21 09:31	1

Client Sample Results

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

Client Sample ID: FS-4 Lab Sample ID: 880-5919-4

Date Collected: 09/08/21 13:55 **Matrix: Solid**
Date Received: 09/09/21 12:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*09/09/21 13:47*	*09/10/21 09:31*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*09/09/21 13:47*	*09/10/21 09:31*	*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	<49.7	U	49.7		mg/Kg		09/09/21 13:32	09/10/21 05:16	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/09/21 13:32	09/10/21 05:16	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/09/21 13:32	09/10/21 05:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*101*		*70 - 130*	*09/09/21 13:32*	*09/10/21 05:16*	*1*
o-Terphenyl	*108*		*70 - 130*	*09/09/21 13:32*	*09/10/21 05:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.0**		5.00		mg/Kg			09/10/21 08:48	1

Client Sample ID: FS-5 Lab Sample ID: 880-5919-5

Date Collected: 09/08/21 14:10 **Matrix: Solid**
Date Received: 09/09/21 12:45

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		09/09/21 13:47	09/10/21 09:51	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/09/21 13:47	09/10/21 09:51	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/09/21 13:47	09/10/21 09:51	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/09/21 13:47	09/10/21 09:51	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/09/21 13:47	09/10/21 09:51	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/09/21 13:47	09/10/21 09:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*09/09/21 13:47*	*09/10/21 09:51*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*09/09/21 13:47*	*09/10/21 09:51*	*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		09/09/21 13:32	09/10/21 05:37	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/09/21 13:32	09/10/21 05:37	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/09/21 13:32	09/10/21 05:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*106*		*70 - 130*	*09/09/21 13:32*	*09/10/21 05:37*	*1*
o-Terphenyl	*110*		*70 - 130*	*09/09/21 13:32*	*09/10/21 05:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**90.7**		5.04		mg/Kg			09/10/21 08:54	1

Surrogate Summary

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-5918-A-1-A MS	Matrix Spike	213 S1+	149 S1+
880-5918-A-1-B MSD	Matrix Spike Duplicate	119	87
880-5919-1	FS-1	108	101
880-5919-2	FS-2	116	99
880-5919-3	FS-3	113	98
880-5919-4	FS-4	124	104
880-5919-5	FS-5	117	102
LCS 880-7706/1-A	Lab Control Sample	138 S1+	109
LCSD 880-7706/2-A	Lab Control Sample Dup	98	93
MB 880-7696/5-A	Method Blank	128	100
MB 880-7706/5-A	Method Blank	164 S1+	107

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-5902-A-22-F MS	Matrix Spike	110	104
880-5902-A-22-G MSD	Matrix Spike Duplicate	111	105
880-5919-1	FS-1	112	116
880-5919-2	FS-2	96	106
880-5919-3	FS-3	100	111
880-5919-4	FS-4	101	108
880-5919-5	FS-5	106	110
LCS 880-7705/2-A	Lab Control Sample	98	100
LCSD 880-7705/3-A	Lab Control Sample Dup	96	104
MB 880-7705/1-A	Method Blank	110	127

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release Remediation

Job ID: 880-5919-1
SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-7696/5-A
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7696

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/09/21 11:55	09/09/21 19:26	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/09/21 11:55	09/09/21 19:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*09/09/21 11:55*	*09/09/21 19:26*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*09/09/21 11:55*	*09/09/21 19:26*	*1*

Lab Sample ID: MB 880-7706/5-A
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
Toluene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		09/09/21 13:47	09/10/21 07:00	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		09/09/21 13:47	09/10/21 07:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*164*	*S1+*	*70 - 130*	*09/09/21 13:47*	*09/10/21 07:00*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*09/09/21 13:47*	*09/10/21 07:00*	*1*

Lab Sample ID: LCS 880-7706/1-A
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07809		mg/Kg		78	70 - 130
Toluene	0.100	0.1023		mg/Kg		102	70 - 130
Ethylbenzene	0.100	0.09775		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	0.200	0.2004		mg/Kg		100	70 - 130
o-Xylene	0.100	0.1084		mg/Kg		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-7706/2-A
Matrix: Solid
Analysis Batch: 7711

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7706

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08162		mg/Kg		82	70 - 130	4	35

QC Sample Results

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

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

Lab Sample ID: LCSD 880-7706/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7711 **Prep Batch: 7706**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09562		mg/Kg		96	70 - 130	7	35
Ethylbenzene			0.100	0.1004		mg/Kg		100	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1874		mg/Kg		94	70 - 130	7	35
o-Xylene			0.100	0.09278		mg/Kg		93	70 - 130	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 880-5918-A-1-A MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7711 **Prep Batch: 7706**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1	0.0998	0.03919	F1	mg/Kg		39	70 - 130
Toluene	<0.00200	U F2 F1	0.0998	0.07828		mg/Kg		78	70 - 130
Ethylbenzene	<0.00200	U F2 F1	0.0998	0.09466		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.200	0.1257	F1	mg/Kg		63	70 - 130
o-Xylene	<0.00200	U F2 F1	0.0998	0.06365	F1	mg/Kg		63	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*213*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*149*	*S1+*	*70 - 130*

Lab Sample ID: 880-5918-A-1-B MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7711 **Prep Batch: 7706**

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	0.03636	F1	mg/Kg		37	70 - 130	7	35
Toluene	<0.00200	U F2 F1	0.0996	0.04681	F2 F1	mg/Kg		47	70 - 130	50	35
Ethylbenzene	<0.00200	U F2 F1	0.0996	0.05308	F2 F1	mg/Kg		53	70 - 130	56	35
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.199	0.07218	F2 F1	mg/Kg		36	70 - 130	54	35
o-Xylene	<0.00200	U F2 F1	0.0996	0.04038	F2 F1	mg/Kg		40	70 - 130	45	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

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

Lab Sample ID: MB 880-7705/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7689 **Prep Batch: 7705**

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		09/09/21 13:31	09/09/21 21:14	1

QC Sample Results

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

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

Lab Sample ID: MB 880-7705/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7689 **Prep Batch: 7705**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/09/21 13:31	09/09/21 21:14	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/09/21 13:31	09/09/21 21:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*09/09/21 13:31*	*09/09/21 21:14*	*1*
o-Terphenyl	*127*		*70 - 130*	*09/09/21 13:31*	*09/09/21 21:14*	*1*

Lab Sample ID: LCS 880-7705/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7689 **Prep Batch: 7705**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	872.0		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1018		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*100*		*70 - 130*

Lab Sample ID: LCSD 880-7705/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7689 **Prep Batch: 7705**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	767.5		mg/Kg		77	70 - 130	13	20
Diesel Range Organics (Over C10-C28)			1000	908.7		mg/Kg		91	70 - 130	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: 880-5902-A-22-F MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 7689 **Prep Batch: 7705**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	997	944.7		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.7	U	997	1149		mg/Kg		114	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*110*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

QC Sample Results

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

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

Lab Sample ID: 880-5902-A-22-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 7689 — **Prep Batch: 7705**

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	<49.7	U	999	1046		mg/Kg		102	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.7	U	999	1186		mg/Kg		117	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*105*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-7707/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7720

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/10/21 07:35	1

Lab Sample ID: LCS 880-7707/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7720

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	257.3		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-7707/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7720

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	258.0		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 880-5918-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7720

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	793	F1	249	1009	F1	mg/Kg		87	90 - 110

Lab Sample ID: 880-5918-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 7720

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	793	F1	249	1010	F1	mg/Kg		87	90 - 110	0	20

QC Association Summary

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

GC VOA

Prep Batch: 7696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7696/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 7706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5919-1	FS-1	Total/NA	Solid	5035	
880-5919-2	FS-2	Total/NA	Solid	5035	
880-5919-3	FS-3	Total/NA	Solid	5035	
880-5919-4	FS-4	Total/NA	Solid	5035	
880-5919-5	FS-5	Total/NA	Solid	5035	
MB 880-7706/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7706/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7706/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-5918-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-5918-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 7711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5919-1	FS-1	Total/NA	Solid	8021B	7706
880-5919-2	FS-2	Total/NA	Solid	8021B	7706
880-5919-3	FS-3	Total/NA	Solid	8021B	7706
880-5919-4	FS-4	Total/NA	Solid	8021B	7706
880-5919-5	FS-5	Total/NA	Solid	8021B	7706
MB 880-7696/5-A	Method Blank	Total/NA	Solid	8021B	7696
MB 880-7706/5-A	Method Blank	Total/NA	Solid	8021B	7706
LCS 880-7706/1-A	Lab Control Sample	Total/NA	Solid	8021B	7706
LCSD 880-7706/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7706
880-5918-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	7706
880-5918-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7706

GC Semi VOA

Analysis Batch: 7689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5919-1	FS-1	Total/NA	Solid	8015B NM	7705
880-5919-2	FS-2	Total/NA	Solid	8015B NM	7705
880-5919-3	FS-3	Total/NA	Solid	8015B NM	7705
880-5919-4	FS-4	Total/NA	Solid	8015B NM	7705
880-5919-5	FS-5	Total/NA	Solid	8015B NM	7705
MB 880-7705/1-A	Method Blank	Total/NA	Solid	8015B NM	7705
LCS 880-7705/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	7705
LCSD 880-7705/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	7705
880-5902-A-22-F MS	Matrix Spike	Total/NA	Solid	8015B NM	7705
880-5902-A-22-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	7705

Prep Batch: 7705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5919-1	FS-1	Total/NA	Solid	8015NM Prep	
880-5919-2	FS-2	Total/NA	Solid	8015NM Prep	
880-5919-3	FS-3	Total/NA	Solid	8015NM Prep	
880-5919-4	FS-4	Total/NA	Solid	8015NM Prep	
880-5919-5	FS-5	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

GC Semi VOA (Continued)

Prep Batch: 7705 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7705/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-7705/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-7705/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-5902-A-22-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-5902-A-22-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 7707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5919-1	FS-1	Soluble	Solid	DI Leach	
880-5919-2	FS-2	Soluble	Solid	DI Leach	
880-5919-3	FS-3	Soluble	Solid	DI Leach	
880-5919-4	FS-4	Soluble	Solid	DI Leach	
880-5919-5	FS-5	Soluble	Solid	DI Leach	
MB 880-7707/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-7707/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-7707/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-5918-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-5918-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 7720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-5919-1	FS-1	Soluble	Solid	300.0	7707
880-5919-2	FS-2	Soluble	Solid	300.0	7707
880-5919-3	FS-3	Soluble	Solid	300.0	7707
880-5919-4	FS-4	Soluble	Solid	300.0	7707
880-5919-5	FS-5	Soluble	Solid	300.0	7707
MB 880-7707/1-A	Method Blank	Soluble	Solid	300.0	7707
LCS 880-7707/2-A	Lab Control Sample	Soluble	Solid	300.0	7707
LCSD 880-7707/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	7707
880-5918-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	7707
880-5918-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	7707

Lab Chronicle

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

Client Sample ID: FS-1 Lab Sample ID: 880-5919-1

Date Collected: 09/08/21 14:50 **Matrix: Solid**
Date Received: 09/09/21 12:45

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	7706	09/09/21 13:47	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7711	09/10/21 08:29	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	7705	09/09/21 13:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7689	09/10/21 04:14	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	7707	09/09/21 14:23	CH	XEN MID
Soluble	Analysis	300.0		1			7720	09/10/21 08:20	CH	XEN MID

Client Sample ID: FS-2 Lab Sample ID: 880-5919-2

Date Collected: 09/08/21 14:55 **Matrix: Solid**
Date Received: 09/09/21 12:45

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	7706	09/09/21 13:47	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7711	09/10/21 08:50	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	7705	09/09/21 13:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7689	09/10/21 04:35	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	7707	09/09/21 14:23	CH	XEN MID
Soluble	Analysis	300.0		1			7720	09/10/21 08:26	CH	XEN MID

Client Sample ID: FS-3 Lab Sample ID: 880-5919-3

Date Collected: 09/08/21 13:45 **Matrix: Solid**
Date Received: 09/09/21 12:45

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	7706	09/09/21 13:47	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7711	09/10/21 09:10	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	7705	09/09/21 13:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7689	09/10/21 04:55	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	7707	09/09/21 14:23	CH	XEN MID
Soluble	Analysis	300.0		1			7720	09/10/21 08:43	CH	XEN MID

Client Sample ID: FS-4 Lab Sample ID: 880-5919-4

Date Collected: 09/08/21 13:55 **Matrix: Solid**
Date Received: 09/09/21 12:45

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	7706	09/09/21 13:47	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7711	09/10/21 09:31	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	7705	09/09/21 13:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7689	09/10/21 05:16	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	7707	09/09/21 14:23	CH	XEN MID
Soluble	Analysis	300.0		1			7720	09/10/21 08:48	CH	XEN MID

Lab Chronicle

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

Client Sample ID: FS-5 **Lab Sample ID: 880-5919-5**
Date Collected: 09/08/21 14:10 **Matrix: Solid**
Date Received: 09/09/21 12:45

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	7706	09/09/21 13:47	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7711	09/10/21 09:51	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	7705	09/09/21 13:32	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7689	09/10/21 05:37	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	7707	09/09/21 14:23	CH	XEN MID
Soluble	Analysis	300.0		1			7720	09/10/21 08:54	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

Laboratory: Eurofins Xenco, Midland

The accreditations/certifications listed below are applicable to this report.

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

Method Summary

Client: Tetra Tech, Inc. Job ID: 880-5919-1
Project/Site: Warren Unit 134 Flowline Release Remediation SDG: Lea County NM

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release Remediation

Job ID: 880-5919-1
SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-5919-1	FS-1	Solid	09/08/21 14:50	09/09/21 12:45
880-5919-2	FS-2	Solid	09/08/21 14:55	09/09/21 12:45
880-5919-3	FS-3	Solid	09/08/21 13:45	09/09/21 12:45
880-5919-4	FS-4	Solid	09/08/21 13:55	09/09/21 12:45
880-5919-5	FS-5	Solid	09/08/21 14:10	09/09/21 12:45

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

900 W Wall St, Ste
Midland,Texas 797
Tel (432) 682-455
Fax (432) 682-394

880-5919 Chain of Custody

Page 1 of 1

880-5919

Client Name	ConocoPhillips Company
Site Manager	Christian Llull (Christian.Llull@tetratech.com)
Project Name	Warren Unit 134 Flowline Release Remediation
Project Location (county, state)	Lea County, NM
Project #	212C-MD-02377 08
Invoice to	Tetra Tech - Accounts Payable; 901 W Wall St , Ste 100, Midland, TX
Receiving Laboratory	Eurofins Scientific
Sampler Signature	Devin Brown
Comments	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	Chloride 300 0	THP 8015M (GRO - DRO - MRO)	Hold
	FS-1	9/8/2021	1450		X			X		1		X	X	X	
	FS-2	9/8/2021	1455		X			X		1		X	X	X	
	FS-3	9/8/2021	1345		X			X		1		X	X	X	
	FS-4	9/8/2021	1355		X			X		1		X	X	X	
	FS-5	9/8/2021	1410		X			X		1		X	X	X	

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9.9.21	1245	[signature]	9/9/21	1245
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time

LAB USE ONLY

Sample Temperature 5 5/6 0

REMARKS

- [ ] STANDARD
- [X] RUSH (24 hr)
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #

ORIGINAL COPY

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 880-5919-1
SDG Number: Lea County NM

Login Number: 5919
List Number: 1
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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 Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-6099-1
Laboratory Sample Delivery Group: Lea County, NM
Client Project/Site: Warren Unit 134

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

Attn: Christian Llull

JKramer

Authorized for release by:
9/16/2021 8:03:36 AM

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

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

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

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Laboratory Job ID: 880-6099-1
SDG: Lea County, NM

Table of Contents

Definitions/Glossary

Client: Tetra Tech, Inc. Job ID: 880-6099-1
Project/Site: Warren Unit 134 SDG: Lea County, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

Job ID: 880-6099-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-6099-1

Receipt
The samples were received on 9/14/2021 3:17 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 2.5°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: WSW-3 (1') (880-6099-2). Evidence of matrix interferences is not obvious.

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

GC Semi VOA
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: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

Client Sample ID: SSW-1 (1')

Lab Sample ID: 880-6099-1
Matrix: Solid
Date Collected: 09/14/21 09:40
Date Received: 09/14/21 15:17

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		09/14/21 17:00	09/15/21 04:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/14/21 17:00	09/15/21 04:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/14/21 17:00	09/15/21 04:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/14/21 17:00	09/15/21 04:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/14/21 17:00	09/15/21 04:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/14/21 17:00	09/15/21 04:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*09/14/21 17:00*	*09/15/21 04:44*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*09/14/21 17:00*	*09/15/21 04:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/14/21 16:18	09/16/21 04:23	1
Diesel Range Organics (Over C10-C28)	**339**		49.8		mg/Kg		09/14/21 16:18	09/16/21 04:23	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/14/21 16:18	09/16/21 04:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*09/14/21 16:18*	*09/16/21 04:23*	*1*
o-Terphenyl	*126*		*70 - 130*	*09/14/21 16:18*	*09/16/21 04:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.7**		5.00		mg/Kg			09/14/21 20:55	1

Client Sample ID: WSW-3 (1')

Lab Sample ID: 880-6099-2
Matrix: Solid
Date Collected: 09/14/21 10:30
Date Received: 09/14/21 15:17

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		09/14/21 17:00	09/15/21 05:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/14/21 17:00	09/15/21 05:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/14/21 17:00	09/15/21 05:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/14/21 17:00	09/15/21 05:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/14/21 17:00	09/15/21 05:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/14/21 17:00	09/15/21 05:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*	*09/14/21 17:00*	*09/15/21 05:05*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/14/21 17:00*	*09/15/21 05:05*	*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		09/14/21 16:18	09/16/21 04:44	1
Diesel Range Organics (Over C10-C28)	**84.5**		50.0		mg/Kg		09/14/21 16:18	09/16/21 04:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/14/21 16:18	09/16/21 04:44	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

Client Sample ID: WSW-3 (1')

Date Collected: 09/14/21 10:30
Date Received: 09/14/21 15:17

Lab Sample ID: 880-6099-2

Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	09/14/21 16:18	09/16/21 04:44	1
o-Terphenyl	126		70 - 130	09/14/21 16:18	09/16/21 04:44	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.3		5.00		mg/Kg			09/14/21 21:01	1

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-6057-A-1-A MS	Matrix Spike	119	87
880-6057-A-1-B MSD	Matrix Spike Duplicate	113	87
880-6099-1	SSW-1 (1')	125	76
880-6099-2	WSW-3 (1')	136 S1+	77
LCS 880-7874/1-A	Lab Control Sample	109	88
LCSD 880-7874/2-A	Lab Control Sample Dup	107	89
MB 880-7758/5-A	Method Blank	113	77
MB 880-7874/5-A	Method Blank	108	77

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-6099-1	SSW-1 (1')	108	126
880-6099-2	WSW-3 (1')	106	126

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-7758/5-A
Matrix: Solid
Analysis Batch: 7857

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7758

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/14/21 09:00	09/14/21 12:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/14/21 09:00	09/14/21 12:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/14/21 09:00	09/14/21 12:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/14/21 09:00	09/14/21 12:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/14/21 09:00	09/14/21 12:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/14/21 09:00	09/14/21 12:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*09/14/21 09:00*	*09/14/21 12:20*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/14/21 09:00*	*09/14/21 12:20*	*1*

Lab Sample ID: MB 880-7874/5-A
Matrix: Solid
Analysis Batch: 7857

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/14/21 12:00	09/14/21 23:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/14/21 12:00	09/14/21 23:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/14/21 12:00	09/14/21 23:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/14/21 12:00	09/14/21 23:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/14/21 12:00	09/14/21 23:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/14/21 12:00	09/14/21 23:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*09/14/21 12:00*	*09/14/21 23:14*	*1*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*09/14/21 12:00*	*09/14/21 23:14*	*1*

Lab Sample ID: LCS 880-7874/1-A
Matrix: Solid
Analysis Batch: 7857

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7874

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09076		mg/Kg		91	70 - 130		
Toluene			0.100	0.08237		mg/Kg		82	70 - 130		
Ethylbenzene			0.100	0.08102		mg/Kg		81	70 - 130		
m-Xylene & p-Xylene			0.200	0.1707		mg/Kg		85	70 - 130		
o-Xylene			0.100	0.08631		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: LCSD 880-7874/2-A
Matrix: Solid
Analysis Batch: 7857

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7874

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1012		mg/Kg		101	70 - 130	11	35

Eurofins Xenco, Midland

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

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

Lab Sample ID: LCSD 880-7874/2-A
Matrix: Solid
Analysis Batch: 7857

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7874

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09352		mg/Kg		94	70 - 130	13	35
Ethylbenzene			0.100	0.09545		mg/Kg		95	70 - 130	16	35
m-Xylene & p-Xylene			0.200	0.1928		mg/Kg		96	70 - 130	12	35
o-Xylene			0.100	0.09783		mg/Kg		98	70 - 130	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-6057-A-1-A MS
Matrix: Solid
Analysis Batch: 7857

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 7874

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.08191		mg/Kg		82	70 - 130
Toluene	<0.00200	U	0.0998	0.07653		mg/Kg		77	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.07815		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	<0.00400	U	0.200	0.1600		mg/Kg		80	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08061		mg/Kg		81	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: 880-6057-A-1-B MSD
Matrix: Solid
Analysis Batch: 7857

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 7874

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.07848		mg/Kg		79	70 - 130	4	35
Toluene	<0.00200	U	0.0996	0.07395		mg/Kg		74	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.0996	0.07503		mg/Kg		75	70 - 130	4	35
m-Xylene & p-Xylene	<0.00400	U	0.199	0.1542		mg/Kg		77	70 - 130	4	35
o-Xylene	<0.00200	U	0.0996	0.07891		mg/Kg		79	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-7862/1-A
Matrix: Solid
Analysis Batch: 7887

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			09/14/21 15:54	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-7862/2-A
Matrix: Solid
Analysis Batch: 7887

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	255.7		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-7862/3-A
Matrix: Solid
Analysis Batch: 7887

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	255.9		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 880-6052-A-1-F MS
Matrix: Solid
Analysis Batch: 7887

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	176		250	418.8		mg/Kg		97	90 - 110		

Lab Sample ID: 880-6052-A-1-G MSD
Matrix: Solid
Analysis Batch: 7887

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	176		250	419.0		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

GC VOA

Prep Batch: 7758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-7758/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 7857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6099-1	SSW-1 (1')	Total/NA	Solid	8021B	7874
880-6099-2	WSW-3 (1')	Total/NA	Solid	8021B	7874
MB 880-7758/5-A	Method Blank	Total/NA	Solid	8021B	7758
MB 880-7874/5-A	Method Blank	Total/NA	Solid	8021B	7874
LCS 880-7874/1-A	Lab Control Sample	Total/NA	Solid	8021B	7874
LCSD 880-7874/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	7874
880-6057-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	7874
880-6057-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	7874

Prep Batch: 7874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6099-1	SSW-1 (1')	Total/NA	Solid	5035	
880-6099-2	WSW-3 (1')	Total/NA	Solid	5035	
MB 880-7874/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-7874/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-7874/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-6057-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-6057-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 7890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6099-1	SSW-1 (1')	Total/NA	Solid	8015NM Prep	
880-6099-2	WSW-3 (1')	Total/NA	Solid	8015NM Prep	

Analysis Batch: 7908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6099-1	SSW-1 (1')	Total/NA	Solid	8015B NM	7890
880-6099-2	WSW-3 (1')	Total/NA	Solid	8015B NM	7890

HPLC/IC

Leach Batch: 7862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6099-1	SSW-1 (1')	Soluble	Solid	DI Leach	
880-6099-2	WSW-3 (1')	Soluble	Solid	DI Leach	
MB 880-7862/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-7862/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-7862/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-6052-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
880-6052-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 7887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6099-1	SSW-1 (1')	Soluble	Solid	300.0	7862
880-6099-2	WSW-3 (1')	Soluble	Solid	300.0	7862
MB 880-7862/1-A	Method Blank	Soluble	Solid	300.0	7862

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

HPLC/IC (Continued)

Analysis Batch: 7887 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-7862/2-A	Lab Control Sample	Soluble	Solid	300.0	7862
LCSD 880-7862/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	7862
880-6052-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	7862
880-6052-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	7862

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

Client Sample ID: SSW-1 (1')

Lab Sample ID: 880-6099-1
Matrix: Solid
Date Collected: 09/14/21 09:40
Date Received: 09/14/21 15:17

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	7874	09/14/21 17:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7857	09/15/21 04:44	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	7890	09/14/21 16:18	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7908	09/16/21 04:23	AM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	7862	09/14/21 15:50	CH	XEN MID
Soluble	Analysis	300.0		1			7887	09/14/21 20:55	CH	XEN MID

Client Sample ID: WSW-3 (1')

Lab Sample ID: 880-6099-2
Matrix: Solid
Date Collected: 09/14/21 10:30
Date Received: 09/14/21 15:17

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	7874	09/14/21 17:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	7857	09/15/21 05:05	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	7890	09/14/21 16:18	DM	XEN MID
Total/NA	Analysis	8015B NM		1			7908	09/16/21 04:44	AM	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	7862	09/14/21 15:50	CH	XEN MID
Soluble	Analysis	300.0		1			7887	09/14/21 21:01	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

Laboratory: Eurofins Xenco, Midland

The accreditations/certifications listed below are applicable to this report.

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

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134

Job ID: 880-6099-1
SDG: Lea County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-6099-1	SSW-1 (1')	Solid	09/14/21 09:40	09/14/21 15:17
880-6099-2	WSW-3 (1')	Solid	09/14/21 10:30	09/14/21 15:17

Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech, Inc.

901 West Wall Street, S
Midland, Texas 79
Tel (432) 682-45
Fax (432) 682-39

880-6099 Chain of Custody

6099

Client Name:	Conoco Phillips	**Site Manager:**	Christian Llull
Project Name:	Warren Unit 134	**Contact Info:**	Email christian.llull@tetratech.com Phone (512) 338-1667
Project Location: (county, state)	Lea County, NM	**Project #:**	212C-MD-02377.08
Invoice to:	Accounts Payable 901 West Wall Street, Suite 100 Midland, Texas 79701		
Receiving Laboratory:	~~Pace Analytical~~ Eurofins Scientific	**Sampler Signature:**	~~Andrew Garcia~~ Devin Brown
Comments:	~~CORTETRA Acctnum~~ Please do not screen for 'PLM' (asbestos); was mistakenly checked on COC		

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR 2021 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD NONE	# CONTAINERS	FILTERED (Y/N)
	SSGJ-1 (1')	9/14	0940		X			X		1	N
	SSGJ-3 (1')	9/14	1020		X			X		1	N

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO DRO - ORO MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol 8260B / 624	GC/MS Semi Vol 8270C/625	PCB s 8082 / 608	NORM	PLM (Asbestos)	Chloride 300 0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	HOLD
X		X													X					
X		X													X					

Relinquished by	Date	Time	Received by	Date	Time
	9.14.21	1220		9.14.21	1220
Relinquished by:	Date	Time	Received by	Date	Time
				9.14.21	1516
Relinquished by:	Date	Time	Received by:	Date	Time

ORIGINAL COPY

LAB USE ONLY

Sample Temperature 2.0/2.5

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking # _____

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 880-6099-1
SDG Number: Lea County, NM

Login Number: 6099
List Number: 1
Creator: Teel, Brianna

List Source: Eurofins Xenco, Midland

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 880-6252-1
Laboratory Sample Delivery Group: Lea County, NM
Client Project/Site: Warren Unit 134 Flowline Release

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

Attn: Christian Llull

JKramer

Authorized for release by:
9/20/2021 3:31:48 PM

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

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

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

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Laboratory Job ID: 880-6252-1
SDG: Lea County, NM

Table of Contents

Definitions/Glossary

Client: Tetra Tech, Inc. Job ID: 880-6252-1
Project/Site: Warren Unit 134 Flowline Release SDG: Lea County, NM

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

Job ID: 880-6252-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-6252-1

Receipt
The sample was received on 9/17/2021 4:46 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.5°C

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

GC Semi VOA
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: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

Client Sample ID: SSW-1 (2-FT)

Date Collected: 09/17/21 10:10
Date Received: 09/17/21 16:46

Lab Sample ID: 880-6252-1

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		09/17/21 16:49	09/18/21 07:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/17/21 16:49	09/18/21 07:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/17/21 16:49	09/18/21 07:38	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/17/21 16:49	09/18/21 07:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/17/21 16:49	09/18/21 07:38	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/17/21 16:49	09/18/21 07:38	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		09/17/21 16:49	09/18/21 07:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*09/17/21 16:49*	*09/18/21 07:38*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*09/17/21 16:49*	*09/18/21 07:38*	*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		09/17/21 17:00	09/18/21 06:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/17/21 17:00	09/18/21 06:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/17/21 17:00	09/18/21 06:48	1
Total TPH	<50.0	U	50.0		mg/Kg		09/17/21 17:00	09/18/21 06:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*09/17/21 17:00*	*09/18/21 06:48*	*1*
o-Terphenyl	*92*		*70 - 130*	*09/17/21 17:00*	*09/18/21 06:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**57.3**		5.00		mg/Kg			09/18/21 06:10	1

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-6252-1	SSW-1 (2-FT)	119	91
890-1261-A-2-A MS	Matrix Spike	129	87
890-1261-A-2-B MSD	Matrix Spike Duplicate	101	81
LCS 880-8041/1-A	Lab Control Sample	106	94
LCSD 880-8041/2-A	Lab Control Sample Dup	101	91
MB 880-8021/5-A	Method Blank	114	101
MB 880-8041/5-A	Method Blank	128	101

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-6238-A-1-C MS	Matrix Spike	100	101
880-6238-A-1-D MSD	Matrix Spike Duplicate	100	100
880-6252-1	SSW-1 (2-FT)	88	92
LCS 880-8049/2-A	Lab Control Sample	111	114
LCSD 880-8049/3-A	Lab Control Sample Dup	111	113
MB 880-8049/1-A	Method Blank	102	113

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-8021/5-A
Matrix: Solid
Analysis Batch: 8018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8021

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/17/21 09:44	09/17/21 13:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/17/21 09:44	09/17/21 13:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/17/21 09:44	09/17/21 13:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/17/21 09:44	09/17/21 13:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/17/21 09:44	09/17/21 13:00	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/17/21 09:44	09/17/21 13:00	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/17/21 09:44	09/17/21 13:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*09/17/21 09:44*	*09/17/21 13:00*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/17/21 09:44*	*09/17/21 13:00*	*1*

Lab Sample ID: MB 880-8041/5-A
Matrix: Solid
Analysis Batch: 8018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/17/21 11:43	09/18/21 00:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/17/21 11:43	09/18/21 00:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/17/21 11:43	09/18/21 00:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/17/21 11:43	09/18/21 00:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/17/21 11:43	09/18/21 00:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/17/21 11:43	09/18/21 00:35	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		09/17/21 11:43	09/18/21 00:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*09/17/21 11:43*	*09/18/21 00:35*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*09/17/21 11:43*	*09/18/21 00:35*	*1*

Lab Sample ID: LCS 880-8041/1-A
Matrix: Solid
Analysis Batch: 8018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07662		mg/Kg		77	70 - 130
Toluene	0.100	0.09388		mg/Kg		94	70 - 130
Ethylbenzene	0.100	0.09752		mg/Kg		98	70 - 130
m-Xylene & p-Xylene	0.200	0.1859		mg/Kg		93	70 - 130
o-Xylene	0.100	0.09275		mg/Kg		93	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

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

Lab Sample ID: LCSD 880-8041/2-A
Matrix: Solid
Analysis Batch: 8018

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 8041

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07816		mg/Kg		78	70 - 130	2	35
Toluene			0.100	0.09453		mg/Kg		95	70 - 130	1	35
Ethylbenzene			0.100	0.09867		mg/Kg		99	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1838		mg/Kg		92	70 - 130	1	35
o-Xylene			0.100	0.09240		mg/Kg		92	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 890-1261-A-2-A MS
Matrix: Solid
Analysis Batch: 8018

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 8041

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00198	U F1 F2	0.0998	0.01052	F1	mg/Kg		11	70 - 130		
Toluene	<0.00198	U F1 F2	0.0998	0.03687	F1	mg/Kg		37	70 - 130		
Ethylbenzene	<0.00198	U F1 F2	0.0998	0.04346	F1	mg/Kg		44	70 - 130		
m-Xylene & p-Xylene	<0.00397	U F1 F2	0.200	0.07924	F1	mg/Kg		39	70 - 130		
o-Xylene	<0.00198	U F1 F2	0.0998	0.04927	F1	mg/Kg		49	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: 890-1261-A-2-B MSD
Matrix: Solid
Analysis Batch: 8018

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 8041

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U F1 F2	0.101	0.07054	F2	mg/Kg		70	70 - 130	148	35
Toluene	<0.00198	U F1 F2	0.101	0.08170	F2	mg/Kg		81	70 - 130	76	35
Ethylbenzene	<0.00198	U F1 F2	0.101	0.08675	F2	mg/Kg		86	70 - 130	66	35
m-Xylene & p-Xylene	<0.00397	U F1 F2	0.202	0.1604	F2	mg/Kg		79	70 - 130	68	35
o-Xylene	<0.00198	U F1 F2	0.101	0.07731	F2	mg/Kg		76	70 - 130	44	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*

QC Sample Results

Client: Tetra Tech, Inc. Job ID: 880-6252-1
Project/Site: Warren Unit 134 Flowline Release SDG: Lea County, NM

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

Lab Sample ID: MB 880-8049/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8026 **Prep Batch: 8049**

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		09/17/21 16:14	09/17/21 21:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/17/21 16:14	09/17/21 21:59	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/17/21 16:14	09/17/21 21:59	1
Total TPH	<50.0	U	50.0		mg/Kg		09/17/21 16:14	09/17/21 21:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*09/17/21 16:14*	*09/17/21 21:59*	*1*
o-Terphenyl	*113*		*70 - 130*	*09/17/21 16:14*	*09/17/21 21:59*	*1*

Lab Sample ID: LCS 880-8049/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8026 **Prep Batch: 8049**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	801.7		mg/Kg		80	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	873.0		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*114*		*70 - 130*

Lab Sample ID: LCSD 880-8049/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8026 **Prep Batch: 8049**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	888.3		mg/Kg		89	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	924.0		mg/Kg		92	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Lab Sample ID: 880-6238-A-1-C MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8026 **Prep Batch: 8049**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	997	836.0		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	997	897.2		mg/Kg		90	70 - 130		

QC Sample Results

Client: Tetra Tech, Inc. Job ID: 880-6252-1
Project/Site: Warren Unit 134 Flowline Release SDG: Lea County, NM

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

Lab Sample ID: 880-6238-A-1-C MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8026 **Prep Batch: 8049**

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 880-6238-A-1-D MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8026 **Prep Batch: 8049**

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	<49.8	U	999	870.1		mg/Kg		87	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.8	U	999	902.4		mg/Kg		90	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	100		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-7885/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7986

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/18/21 03:50	1

Lab Sample ID: LCS 880-7885/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7986

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	245.5		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-7885/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7986

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	246.6		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 880-6058-A-64-C MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 7986

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	123		250	374.6		mg/Kg		101	90 - 110		

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-6058-A-64-D MSD
Matrix: Solid
Analysis Batch: 7986

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	123		250	375.7		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

GC VOA

Analysis Batch: 8018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6252-1	SSW-1 (2-FT)	Total/NA	Solid	8021B	8041
MB 880-8021/5-A	Method Blank	Total/NA	Solid	8021B	8021
MB 880-8041/5-A	Method Blank	Total/NA	Solid	8021B	8041
LCS 880-8041/1-A	Lab Control Sample	Total/NA	Solid	8021B	8041
LCSD 880-8041/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	8041
890-1261-A-2-A MS	Matrix Spike	Total/NA	Solid	8021B	8041
890-1261-A-2-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	8041

Prep Batch: 8021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-8021/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 8041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6252-1	SSW-1 (2-FT)	Total/NA	Solid	5035	
MB 880-8041/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-8041/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-8041/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1261-A-2-A MS	Matrix Spike	Total/NA	Solid	5035	
890-1261-A-2-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

GC Semi VOA

Analysis Batch: 8026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6252-1	SSW-1 (2-FT)	Total/NA	Solid	8015B NM	8049
MB 880-8049/1-A	Method Blank	Total/NA	Solid	8015B NM	8049
LCS 880-8049/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	8049
LCSD 880-8049/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	8049
880-6238-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	8049
880-6238-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	8049

Prep Batch: 8049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6252-1	SSW-1 (2-FT)	Total/NA	Solid	8015NM Prep	
MB 880-8049/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-8049/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-8049/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-6238-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-6238-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 7885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6252-1	SSW-1 (2-FT)	Soluble	Solid	DI Leach	
MB 880-7885/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-7885/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-7885/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-6058-A-64-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-6058-A-64-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

HPLC/IC

Analysis Batch: 7986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-6252-1	SSW-1 (2-FT)	Soluble	Solid	300.0	7885
MB 880-7885/1-A	Method Blank	Soluble	Solid	300.0	7885
LCS 880-7885/2-A	Lab Control Sample	Soluble	Solid	300.0	7885
LCSD 880-7885/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	7885
880-6058-A-64-C MS	Matrix Spike	Soluble	Solid	300.0	7885
880-6058-A-64-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	7885

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

Client Sample ID: SSW-1 (2-FT)

Date Collected: 09/17/21 10:10
Date Received: 09/17/21 16:46

Lab Sample ID: 880-6252-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	8041	09/17/21 16:49	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	8018	09/18/21 07:38	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	8049	09/17/21 17:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			8026	09/18/21 06:48	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	7885	09/17/21 17:00	CH	XEN MID
Soluble	Analysis	300.0		1			7986	09/18/21 06:10	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Tetra Tech, Inc. Job ID: 880-6252-1
Project/Site: Warren Unit 134 Flowline Release SDG: Lea County, NM

Laboratory: Eurofins Xenco, Midland

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

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

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

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

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

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

Protocol References:

ASTM = ASTM International

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

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

Laboratory References:

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

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Warren Unit 134 Flowline Release

Job ID: 880-6252-1
SDG: Lea County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-6252-1	SSW-1 (2-FT)	Solid	09/17/21 10:10	09/17/21 16:46

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

900 W Wall St Ste 100
Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name	ConocoPhillips Company	**Site Manager**	Christian Llull (christian llull@tetratech com) Joe Tyler (joe tyler@tetratech com)
Project Name	Warren Unit 134 Flowline Release		
Project Location (county, state)	Lea County, NM	**Project #**	212C-MD-02377 (Task 08)
Invoice to	Tetra Tech - Accounts Payable, 901 W Wall St , Ste. 100, Midland, TX		
Receiving Laboratory	Eurofins Scientific	**Sampler Signature**	Devin Brown
Comments			

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	Chloride 300 Method	TPH 8015M (GRO - DRO - ORO)	Hold
	SSW-1 (2-FT)	9/17/2021	1010		X				X			1		X	X	X	

Relinquished by:	Date 9/17/21 Time	Received by:	Date 9/17 Time
Relinquished by	Date Time	Received by	Date Time 1645
Relinquished by	Date Time	Received by:	Date Time

LAB USE ONLY
Sample Temperature
2.0/2.5

REMARKS:
- ☐ STANDARD
- ☒ RUSH 24 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking # _____

ORIGINAL COPY

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 880-6252-1
SDG Number: Lea County, NM

Login Number: 6252
List Number: 1
Creator: Teel, Brianna

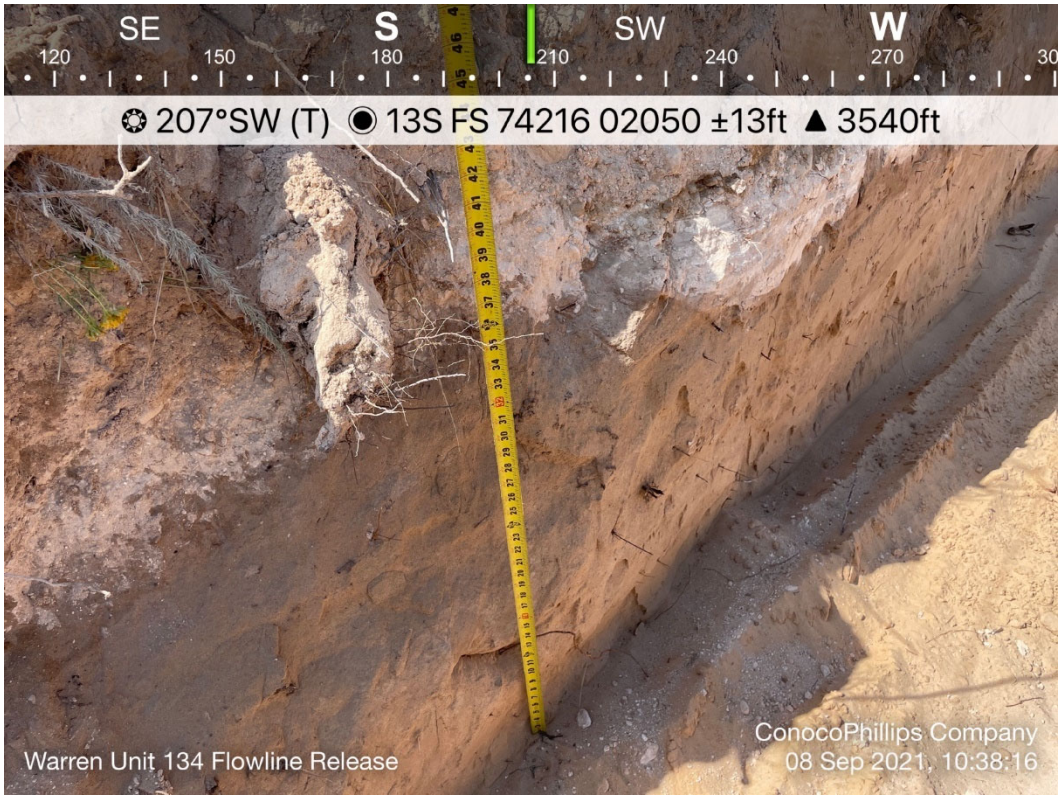
List Source: Eurofins Xenco, Midland

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

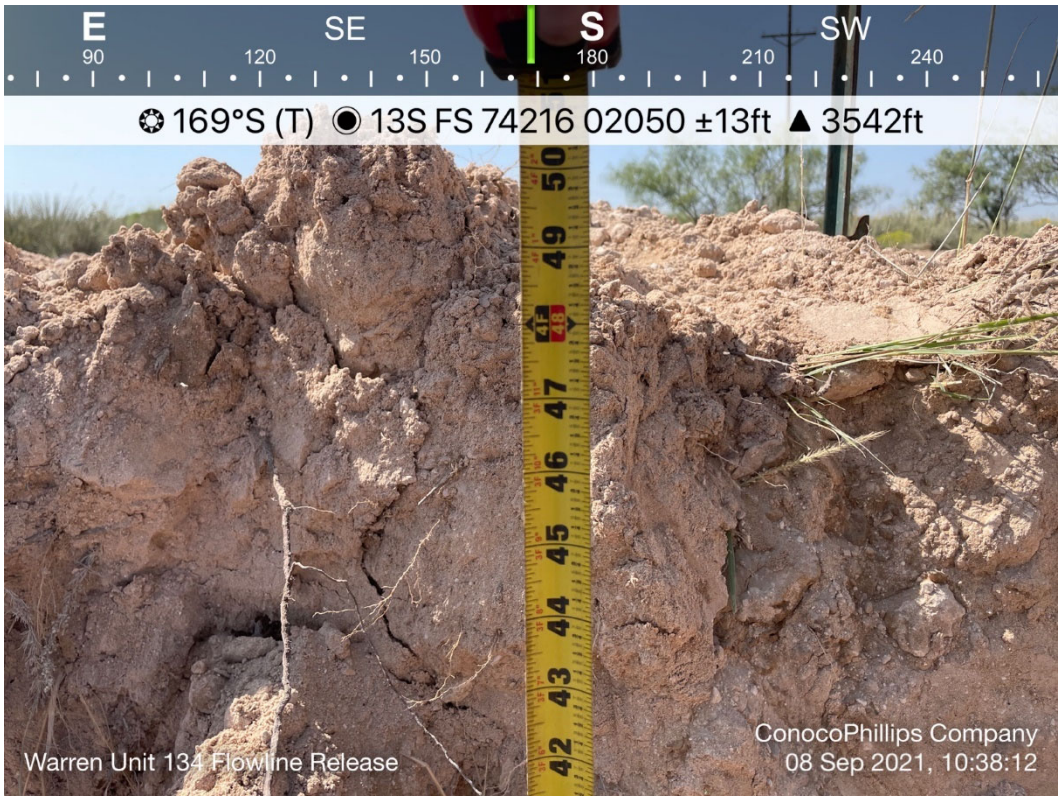
APPENDIX D
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View west of the release point and excavated area around flowlines.	1
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/7/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View west of the release point and excavated area around flowlines.	2
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/7/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the depth measurements taken within the excavated area.	3
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/8/2021



TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the depth measurements taken within the excavated area.	4
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/8/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View southwest of the excavated area and lease road.	5
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/8/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View near the southern edge of the excavated area and adjacent lease road.	6
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/8/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the southern edge of the excavated area and step outs.	7
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/17/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the southern edge of the excavated area and step outs.	8
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/17/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the excavation area being backfilled.	9
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/17/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the excavation area being backfilled.	10
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/17/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the excavation area backfilled.	11
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/17/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the excavation area backfilled.	12
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/17/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View of the reseeding process.	13
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/17/2021

TETRA TECH, INC. PROJECT NO. 212C-MD-02377	DESCRIPTION	View after reseeding process.	14
	SITE NAME	ConocoPhillips Warren Unit 134 Flowline Release	9/17/2021

APPENDIX E
Waste Manifests

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	1
Manif. Date:	9/8/2021
Hauler:	MCNABB PARTNERS
Driver	JESUS
Truck #	M33
Card #	
Job Ref #	

Ticket #:	700-1235496
Bid #:	O6UJ9A000HH0
Date:	9/8/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	14.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	2
Manif. Date:	9/8/2021
Hauler:	MCNABB PARTNERS
Driver	JESUS
Truck #	M33
Card #	
Job Ref #	

Ticket #:	700-1235521
Bid #:	O6UJ9A000HH0
Date:	9/8/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	14.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	3
Manif. Date:	9/8/2021
Hauler:	MCNABB PARTNERS
Driver	JESUS
Truck #	M33
Card #	
Job Ref #	

Ticket #:	700-1235568
Bid #:	O6UJ9A000HH0
Date:	9/8/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	14.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

_ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	KELSY WAGGAMAN
AFE #:	
PO #:	
Manifest #:	4
Manif. Date:	9/9/2021
Hauler:	MCNABB PARTNERS
Driver	EDDIE
Truck #	M02
Card #	
Job Ref #	

Ticket #:	700-1235726
Bid #:	O6UJ9A000HH0
Date:	9/9/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity	Units
Contaminated Soil (RCRA Exempt)	9.00	yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature

Eddie M

R360 Representative Signature

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	KELSY WAGGAMAN
AFE #:	
PO #:	
Manifest #:	5
Manif. Date:	9/9/2021
Hauler:	MCNABB PARTNERS
Driver	EDDIE
Truck #	M02
Card #	
Job Ref #	

Ticket #:	700-1235754
Bid #:	O6UJ9A000HH0
Date:	9/9/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	9.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature

Eddie Mc

R360 Representative Signature

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01K5PY

9/9/2021 11:30:07AM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	KELSY WAGGAMAN
AFE #:	
PO #:	
Manifest #:	6
Manif. Date:	9/9/2021
Hauler:	MCNABB PARTNERS
Driver	EDDIE
Truck #	M02
Card #	
Job Ref #	

Ticket #:	700-1235789
Bid #:	O6UJ9A000HH0
Date:	9/9/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	9.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature Eddie M

R360 Representative Signature

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	7
Manif. Date:	9/10/2021
Hauler:	MCNABB PARTNERS
Driver	GUMER
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1235946
Bid #:	O6UJ9A000HH0
Date:	9/10/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	14.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	28	0.00	0.00	0.00	0			0.00			

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt wast

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature _____

R360 Representative Signature _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	8
Manif. Date:	9/10/2021
Hauler:	MCNABB PARTNERS
Driver	JESUS
Truck #	M33
Card #	
Job Ref #	

Ticket #:	700-1235950
Bid #:	O6UJ9A000HH0
Date:	9/10/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	14.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	28	0.00	0.00	0.00	0			0.00	0.00	0	

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste

__ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24 or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items):

__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature _____

R360 Representative Signature _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	9
Manif. Date:	9/10/2021
Hauler:	MCNABB PARTNERS
Driver	JESSE
Truck #	M82
Card #	
Job Ref #	

Ticket #:	700-1235951
Bid #:	O6UJ9A000HH0
Date:	9/10/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	16.00 yards

	Cell	pH	Cl	Cond.	%Solids	TDS	PCI/GM	MR/HR	H2S	% Oil	Weight
Lab Analysis:	28	0.00	0.00	0.00	0			0.00			

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

X RCRA Exempt: Oil Field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature _____

R360 Representative Signature _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	10
Manif. Date:	9/14/2021
Hauler:	MCNABB PARTNERS
Driver	JESSE
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1236724
Bid #:	O6UJ9A000HH0
Date:	9/14/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	14.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01K7TX 9/14/2021 9:18:09AM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	11
Manif. Date:	9/14/2021
Hauler:	MCNABB PARTNERS
Driver	JESSE
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1236787
Bid #:	O6UJ9A000HH0
Date:	9/14/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	14.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01K7ZS 9/14/2021 1:51:59PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	12
Manif. Date:	9/14/2021
Hauler:	MCNABB PARTNERS
Driver	JESSE
Truck #	M32
Card #	
Job Ref #	

Ticket #:	700-1236848
Bid #:	O6UJ9A000HH0
Date:	9/14/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	14.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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__ MSDS Information __ RCRA Hazardous Waste Analysis __ Process Knowledge __ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

t6UJ9A01K85E 9/14/2021 4:08:30PM

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	13
Manif. Date:	9/15/2021
Hauler:	MCNABB PARTNERS
Driver	URIEL
Truck #	M80
Card #	
Job Ref #	

Ticket #:	700-1236983
Bid #:	O6UJ9A000HH0
Date:	9/15/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	14.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

_____ _____

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

R360 ENVIRONMENTAL SOLUTIONS

Permian Basin

Customer:	CONOCOPHILLIPS
Customer #:	CRI2190
Ordered by:	DEVIN BROWN
AFE #:	
PO #:	
Manifest #:	14
Manif. Date:	9/17/2021
Hauler:	MCNABB PARTNERS
Driver	JOHN
Truck #	M31
Card #	
Job Ref #	

Ticket #:	700-1237501
Bid #:	O6UJ9A000HH0
Date:	9/17/2021
Generator:	CONOCOPHILLIPS
Generator #:	
Well Ser. #:	33487
Well Name:	WARREN UNIT
Well #:	134
Field:	
Field #:	
Rig:	NON-DRILLING
County	LEA (NM)

Facility: CRI

Product / Service	Quantity Units
Contaminated Soil (RCRA Exempt)	10.00 yards

Generator Certification Statement of Waste Status

I hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is:

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_ MSDS Information _ RCRA Hazardous Waste Analysis _ Process Knowledge _ Other (Provide description above)

Driver/ Agent Signature **R360 Representative Signature**

Customer Approval

THIS IS NOT AN INVOICE!

Approved By: _____ Date: _____

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 54567

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 54567
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	11/15/2021