



May 22, 2023

Brittany Hall  
Projects Environmental Specialist  
New Mexico Energy, Minerals, and Natural Resources Department  
1220 South St. Francis Drive  
Santa Fe, NM 87505

**Re: Closure Report  
ConocoPhillips  
Heritage Concho  
Canvasback 13 Federal #002H  
Unit Letter I, Section 13, Township 24 South, Range 31 East  
Eddy County, New Mexico  
Incident ID# nAB1817150139**

Ms. Hall:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips to assess a Heritage Concho release that occurred at a flowline associated with the Canvasback 13 Federal #002H well (API No. 30-015-40538). The reported release footprint is located in Public Land Survey System (PLSS) Unit Letter I, Section 13, Township 24 South, Range 31 East, in Eddy County, New Mexico (Site). The approximate release point is located at coordinates 32.214831°, -103.722968°, as shown on Figures 1 and 2.

## BACKGROUND

According to the C-141 Initial Report, the release was caused by a flowline rupture on June 13, 2018. Approximately 25 bbls of produced water were released into the pasture along the lease road, and no fluids were recovered. The New Mexico Oil Conservation Division (NMOCD) approved the initial C-141 on June 15, 2018 and assigned the release the Incident ID nAB1817150139. The C-141 is included as Appendix A.

## SITE CHARACTERIZATION

A site characterization was performed and no sinkholes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, 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. According to the nearest well data, groundwater in the vicinity is approximately 850 feet below ground surface (bgs). The site characterization data are presented in Appendix B.

## REGULATORY FRAMEWORK

Based upon the release footprint location and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action

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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 remediation RRALs for the Site are as follows:

Constituent	Site RRALs
Chloride	20,000 mg/kg
TPH (GRO+DRO+ORO)	2,500 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

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

Constituent	Reclamation Requirements
Chloride	600 mg/kg
TPH (GRO+DRO+ORO)	100 mg/kg

## INITIAL SITE ASSESSMENT AND REMEDIAL ACTIVITIES

On behalf of COG, on June 19-20, 2018, TRC Environmental Corporation (TRC) collected fifteen (15) soil samples from seven (7) hand auger locations (HA-1 through HA-7) to determine the vertical extent of soil impact and an additional eleven (11) soil samples from the perimeter of the release to determine the horizontal extent of soil impacts. TRC returned to the Site on October 24, 2018, to collect an additional six (6) surface samples to complete delineation. The initial assessment sampling locations are presented in Figure 3. The analytical results from the 2018 initial assessment activities are summarized in Table 1.

The Bureau of Land Management (BLM) denied a request for closure of the release on December 14, 2018 and requested that surface soils (0-4 feet bgs) be remediated to below 600 mg/kg for chloride concentrations. On April 10, 2019, Concho excavated three (3) areas represented by sample locations HA-3, HA-6, and E-1, as shown on Figure 4. Five-point composite confirmation samples were collected from the floors and sidewalls of the excavated areas, and the excavation areas were expanded based on the results of the confirmation sampling until analytical results were below the applicable Site RRALs for subsurface (>4 feet bgs) soils or reclamation requirements for surface (0-4 feet bgs) soils. The confirmation analytical results from the 2019 remediation activities are summarized in Table 2.

TRC submitted a Remediation Summary, Deferral Request and Closure Report dated April 25, 2019, which described the site characterization, initial site assessment, and remediation activities conducted at the Site. The TRC report included a deferral request for remediation of the area represented by sample location HA-7 due to the presence of above-ground pipelines. A copy of the Remediation Summary, Deferral Request and Closure Report is available on the NMOCD online incident files.

The Remediation Summary, Deferral Request and Closure Report was approved by NMOCD on November 28, 2022, with the following comments:

- *“Deferral of contamination located at and around HA-7 approved until retrofit of area or abandonment of site, whichever ever comes first. Closure of incident not approved until area of HA-7 remediated. A complete closure report for the release will need to be submitted when all remediation is completed.*
- *2RP-4813 closed. Please refer to incident #NAB1817150139 for future communication.”*

A copy of regulatory correspondence is included as Appendix C.

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**ADDITIONAL SITE ASSESSMENT AND SAMPLING RESULTS**

Tetra Tech conducted additional soil sampling at the Site on behalf of ConocoPhillips to assess the deferred area of contamination at and around sampling location HA-7 for final remediation and/or closure. On May 8, 2023, Tetra Tech installed four (4) hand auger borings (AH-23-1 through AH23-4) in the deferred area of TRC sample location HA-7, in the locations indicated on Figure 5. Photographic documentation from the 2023 confirmation sampling activities is presented in Appendix D.

A total of six (6) soil samples were collected from the four borings and sent to Cardinal Laboratories in Midland, Texas to be analyzed for chloride via EPA Method 4500.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8261B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix E.

Analytical results from the 2023 confirmation sampling activities are summarized in Table 3. All analytical results were below the applicable Site RRALs for all constituents.

**CONCLUSION**

As all analytical results associated with the 2023 confirmation sampling results were below the Site RRALs, no final remediation of the previously deferred portion of the release footprint is required. ConocoPhillips respectfully requests closure for this release. The final C-141 forms are enclosed in Appendix A. If you have any questions concerning the soil assessment activities for the Site, please call me at (512) 739-7874.

Sincerely,  
**Tetra Tech, Inc.**



Samantha Abbott, P.G.  
Project Manager



Christian M. Llull, P.G.  
Program Manager

cc:  
Mr. Moises Cantu Garcia, PBU – ConocoPhillips

## LIST OF ATTACHMENTS

### Figures:

- Figure 1 – Overview Map
- Figure 2 – Topographic Map
- Figure 3 – Inferred Release Extent and Site Assessment (TRC)
- Figure 4 – Inferred Release Extent and Remediated Areas (TRC)
- Figure 5 – Inferred Release Extent and Additional Assessment (Tetra Tech)

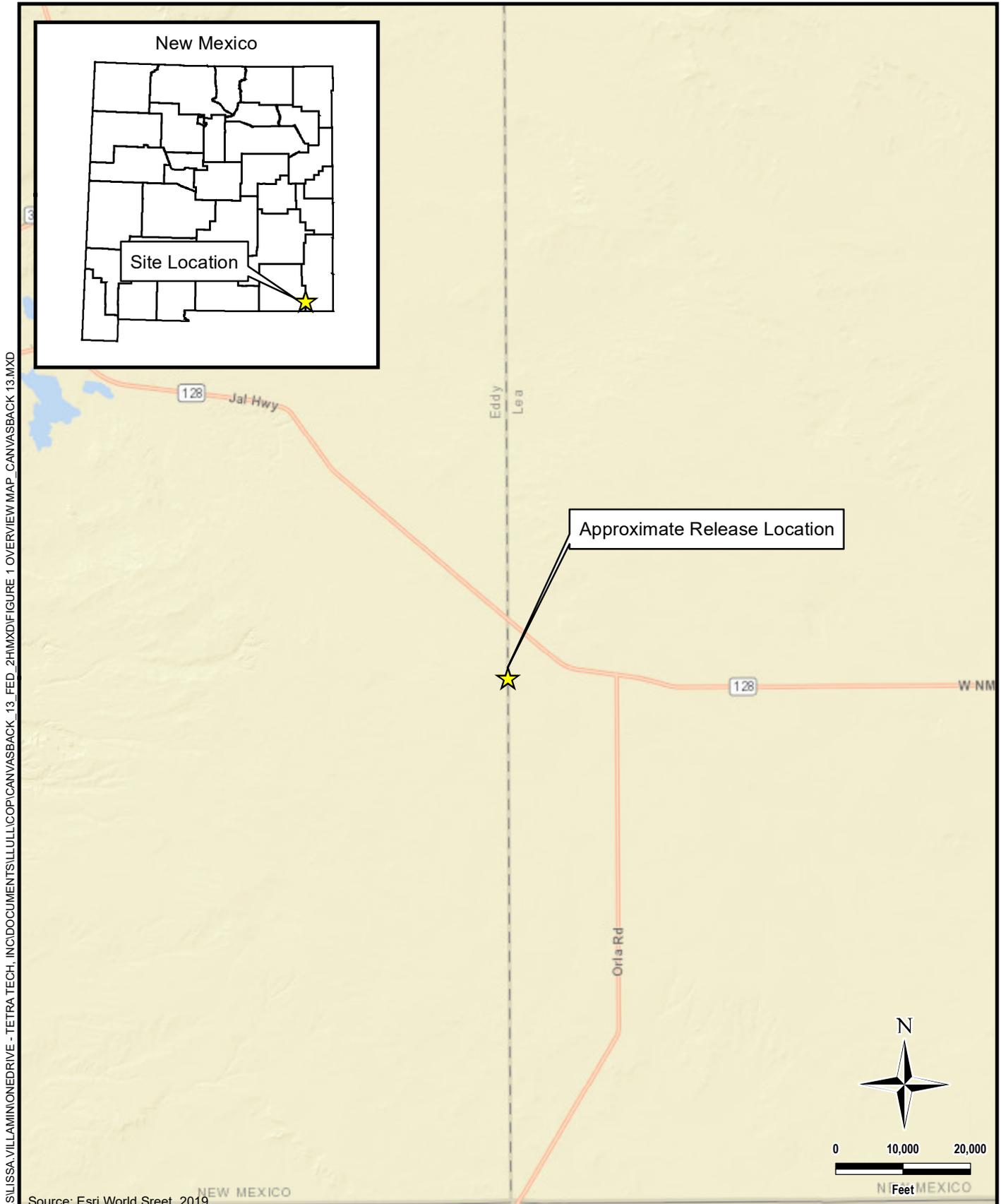
### Tables:

- Table 1 – Summary of Analytical Results – TRC 2018 Soil Assessment
- Table 2 – Summary of Analytical Results – TRC 2019 Soil Remediation
- Table 3 – Summary of Analytical Results – Tetra Tech 2023 Additional Soil Assessment

### Appendices:

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

# **FIGURES**



DOCUMENT PATH: C:\USERS\LISSA.VILLAMINONEDRIVE - TETRA TECH\INCDOCUMENTS\LISSA.VILLAMINONEDRIVE\CANVASBACK\_13\_FED\_2\HMXD\Figure 1 OVERVIEW MAP\_CANVASBACK 13.MXD

Source: Esri World Street, 2019.



**TETRA TECH**

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**CONOCOPHILLIPS**

NAB1817150139  
(32.214831°, -103.722968°)  
EDDY COUNTY, NEW MEXICO

**CANVASBACK 13 FEDERAL #002H  
OVERVIEW MAP**

PROJECT NO.: 212C-MD-03003

DATE: MARCH 24, 2023

DESIGNED BY: LMV

Figure No.

**1**

DOCUMENT PATH: C:\USERS\LISSA.VILLAMONEDRIVE - TETRA TECH\INC\DOCUMENTS\ILLULLI\COP\CANVASBACK\_13\_FED\_2\HMXD\Figure 2 TOPO MAP\_CANVASBACK\_13.MXD

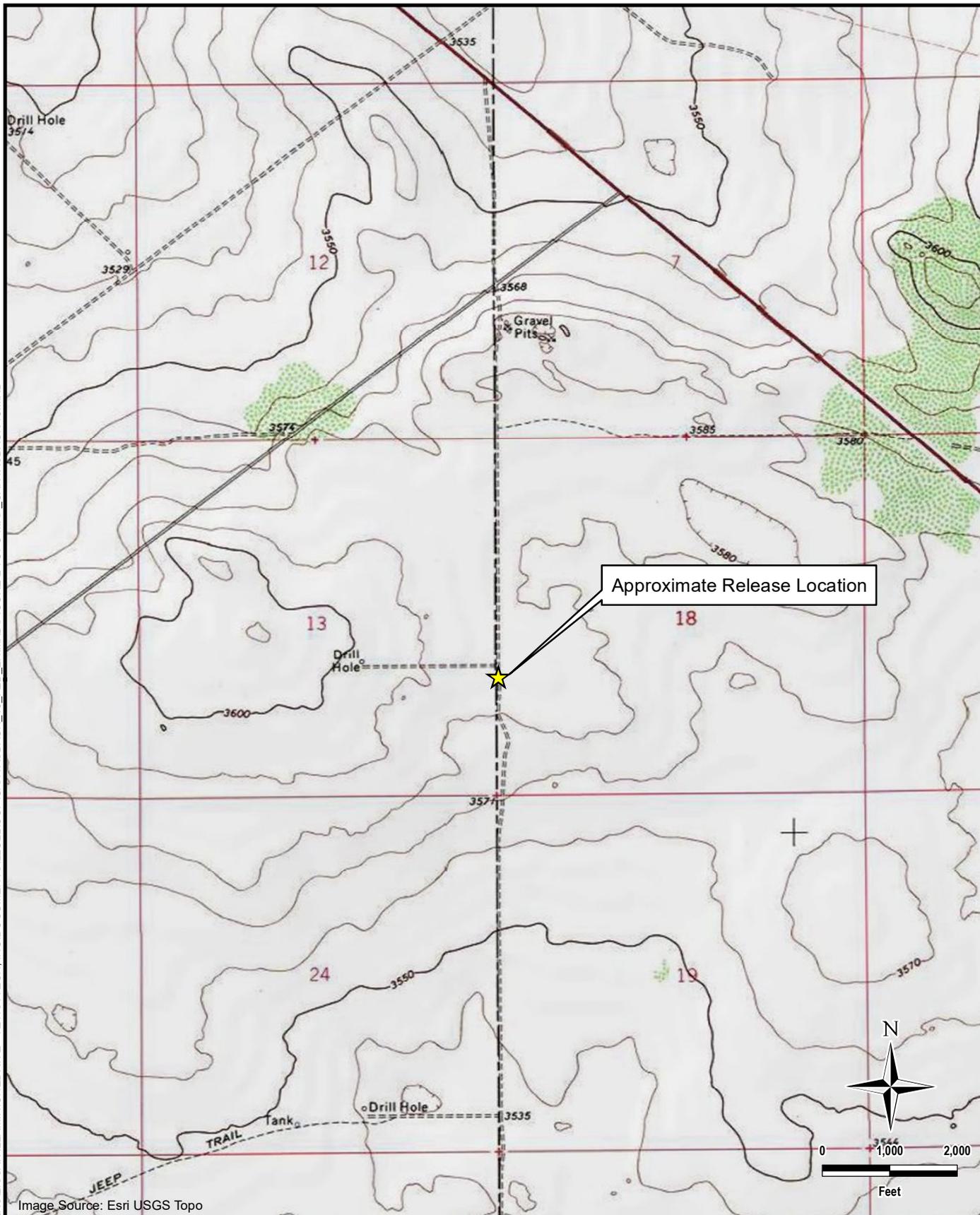


Image Source: Esri USGS Topo



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(32.214831°, -103.722968°)  
EDDY COUNTY, NEW MEXICO

**CANVASBACK 13 FEDERAL #002H  
TOPOGRAPHIC MAP**

PROJECT NO.: 212C-MD-03003

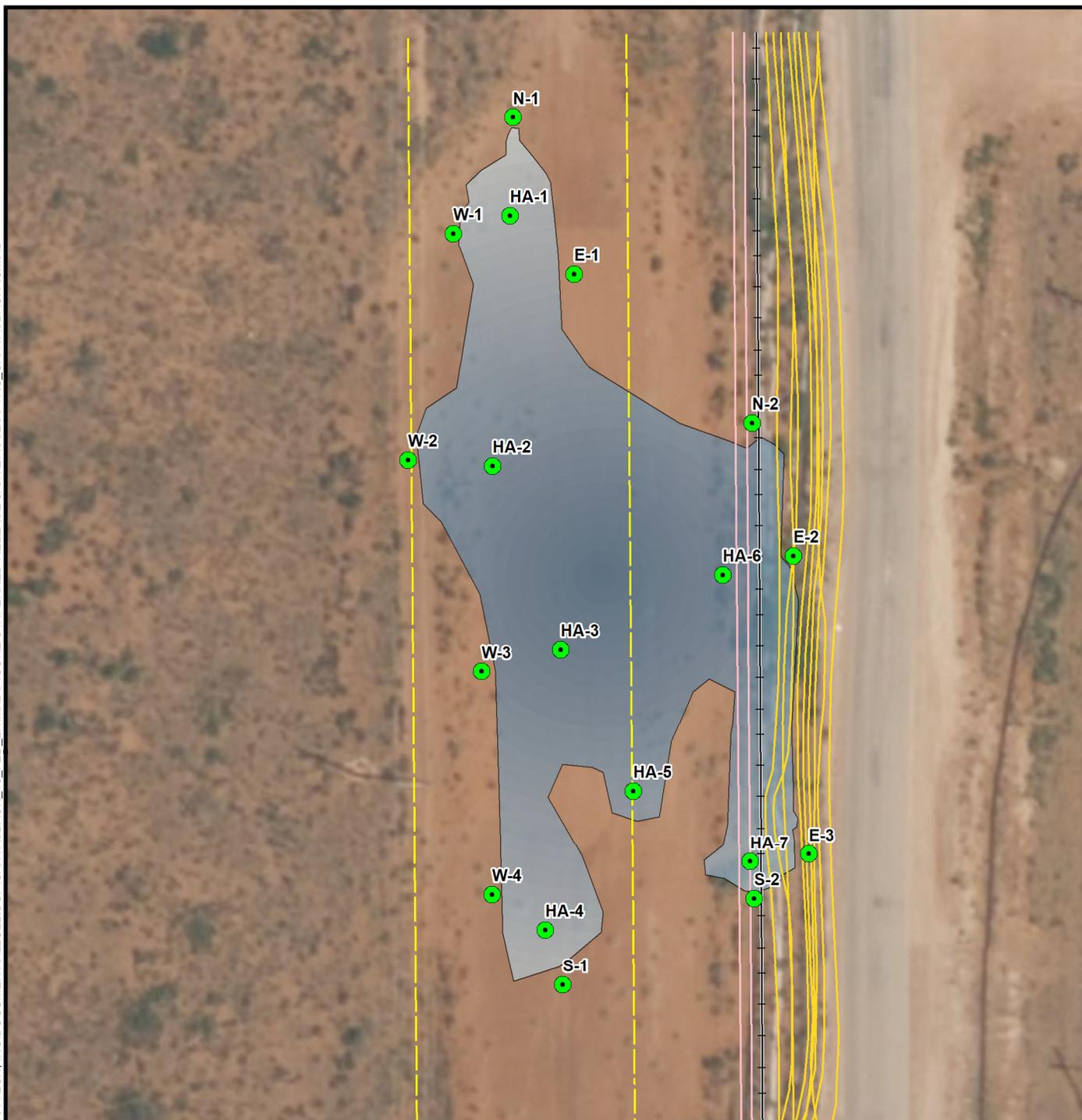
DATE: MARCH 24, 2023

DESIGNED BY: LMV

Figure No.

**2**

DOCUMENT PATH: C:\USERS\LISSA.VILLAMINONEDRIVE - TETRA TECH\INC\DOCUMENTS\11111\COP\CANVASBACK\_13\_FED\_2\HIMXD\FIGURE 3 INFERRED RELEASE & SITE ASSESS TRC\_CANVASBACK 13.MXD



Legend	
	Soil Sample Locations (TRC)
	Inferred Release Extent
	Fence
	Subsurface Pipeline
	Surface Pipeline
	Surface Pipeline (10")

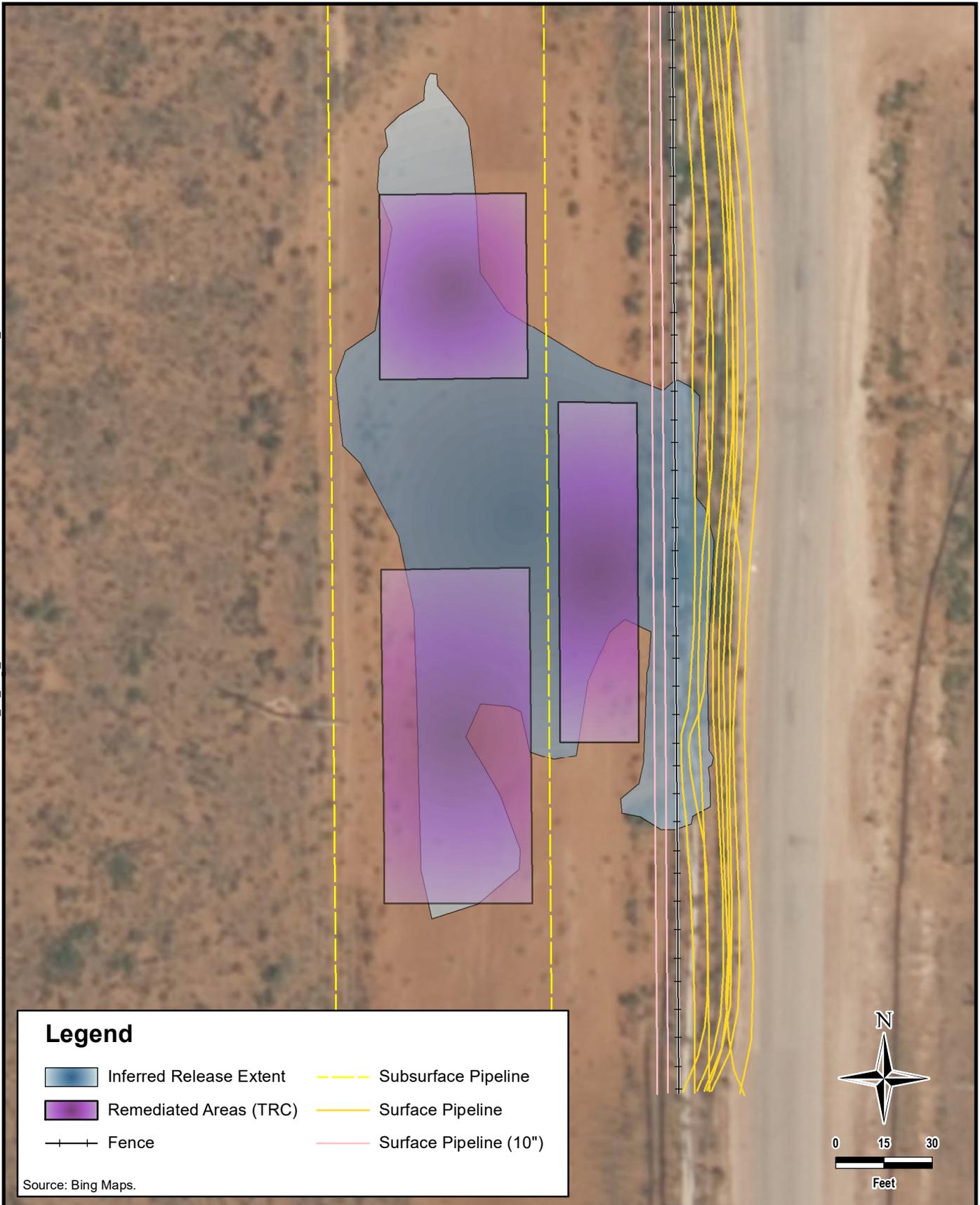
Source: Bing Maps.



<p><b>TETRA TECH</b></p> <p>www.tetratech.com</p> <p>901 West Wall Street, Suite 100 Midland, Texas 79701 Phone: (432) 682-4559 Fax: (432) 682-3946</p>	<p align="center"><b>CONOCOPHILLIPS</b></p> <p align="center">NAB1817150139 (32.214831°, -103.722968°) EDDY COUNTY, NEW MEXICO</p>
	<p align="center"><b>CANVASBACK 13 FEDERAL #002H</b> <b>INFERRED RELEASE EXTENT AND SITE ASSESSMENT (TRC)</b></p>

PROJECT NO.:	212C-MD-03003
DATE:	MARCH 24, 2023
DESIGNED BY:	LMV
Figure No.	<b>3</b>

DOCUMENT PATH: C:\USERS\LISSA.VILLAMINONEDRIVE - TETRA TECH\INC\DOCUMENTS\LISSA.VILLAMINONEDRIVE\CANVASBACK\_13\_FED\_2\HIMXD\FIGURE 4 INFERRED RELEASE & REMEDIATED TRC\_CANVASBACK\_13.MXD



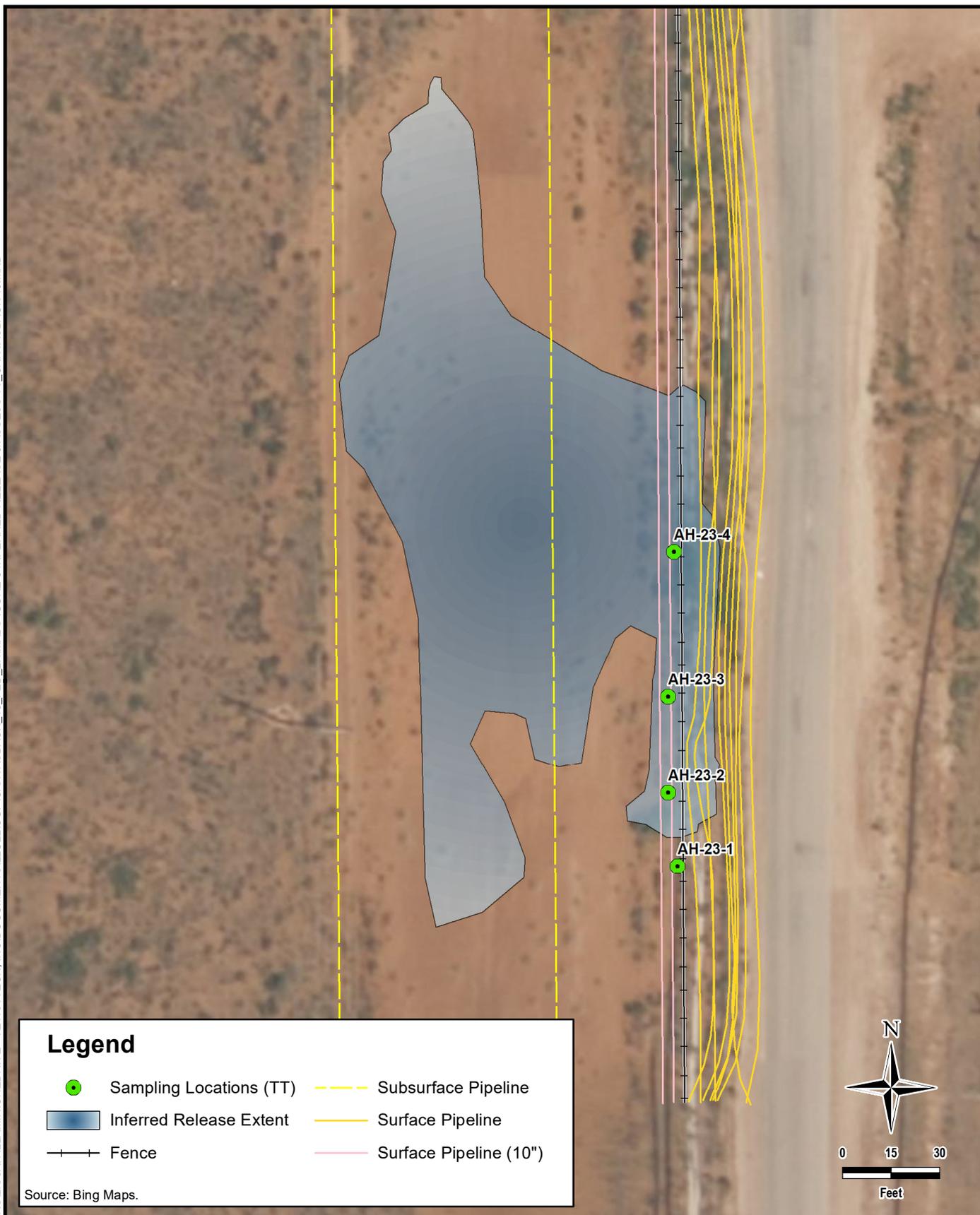
Legend	
	Inferred Release Extent
	Remediated Areas (TRC)
	Fence
	Subsurface Pipeline
	Surface Pipeline
	Surface Pipeline (10")

Source: Bing Maps.

<p><b>TETRA TECH</b></p> <p>www.tetratech.com</p> <p>901 West Wall Street, Suite 100 Midland, Texas 79701 Phone: (432) 682-4559 Fax: (432) 682-3946</p>	<p><b>CONOCOPHILLIPS</b></p> <p>NAB1817150139 (32.214831°, -103.722968°) EDDY COUNTY, NEW MEXICO</p>
	<p><b>CANVASBACK 13 FEDERAL #002H</b></p> <p><b>INFERRED RELEASE EXTENT AND REMEDIATED AREAS (TRC)</b></p>

PROJECT NO.:	212C-MD-03003
DATE:	MAY 15, 2023
DESIGNED BY:	LMV
Figure No.	<b>4</b>

DOCUMENT PATH: C:\USERS\LISSA.VILLAMINON\DRIVE - TETRA TECH\INC\DOCUMENTS\ILLULLI\COP\CANVASBACK\_13\_FED\_2\HIMXD\FIGURE 5 INFERRED RELEASE & ASSESS TT\_CANVASBACK\_13.MXD



**Legend**

- Sampling Locations (TT)
- Inferred Release Extent
- +—+— Fence
- Subsurface Pipeline
- Surface Pipeline
- Surface Pipeline (10")

Source: Bing Maps.

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**CONOCOPHILLIPS**

NAB1817150139  
(32.214831°, -103.722968°)  
EDDY COUNTY, NEW MEXICO

**CANVASBACK 13 FEDERAL #002H**  
**INFERRED RELEASE EXTENT AND ADDITIONAL ASSESSMENT**  
**(TETRA TECH)**

PROJECT NO.:	212C-MD-03003
DATE:	MAY 15, 2023
DESIGNED BY:	LMV
Figure No.	<b>5</b>

# **TABLES**

TABLE 1  
 SUMMARY OF ANALYTICAL RESULTS  
 TRC 2018 SOIL ASSESSMENT - nAB1817150139  
 CONOCOPHILLIPS  
 CANVASBACK 13 FEDERAL #002H  
 EDDY COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride <sup>1</sup>		BTEX <sup>2</sup>								TPH <sup>3</sup>									
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		ORO		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
HA-1	6/19/2018	0.5	<25.0		NS		NS		NS		NS		-		NS		NS		NS		-	
		1	<25.0		NS		NS		NS		NS		-		NS		NS		NS		-	
HA-1B	10/24/2018	SURFACE	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
HA-2	6/19/2018	0.5	203		NS		NS		NS		NS		-		NS		NS		NS		-	
		1	<25.0		NS		NS		NS		NS		-		NS		NS		NS		-	
HA-2B	10/24/2018	SURFACE	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		13.8		<10.0		13.8	
HA-3	6/19/2018	0.5	<b>2,130</b>	D	NS		NS		NS		NS		-		NS		NS		NS		-	
		2	28.7		NS		NS		NS		NS		-		NS		NS		NS		-	
HA-3B	10/24/2018	SURFACE	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
HA-4	6/19/2018	0.5	<25.0		NS		NS		NS		NS		-		NS		NS		NS		-	
HA-4B	10/24/2018	SURFACE	32		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
HA-5	6/19/2018	0.5	366		NS		NS		NS		NS		-		NS		NS		NS		-	
HA-6	6/19/2018	1	<b>9,880</b>		NS		NS		NS		NS		-		NS		NS		NS		-	
		3	319		NS		NS		NS		NS		-		NS		NS		NS		-	
		4	326		NS		NS		NS		NS		-		NS		NS		NS		-	
HA-6B	10/24/2018	SURFACE	16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		10.1		<10.0		10.1	
HA-7	6/19/2018	1	<b>3,760</b>		NS		NS		NS		NS		-		NS		NS		NS		-	
		6	472		NS		NS		NS		NS		-		NS		NS		NS		-	
		7	292		NS		NS		NS		NS		-		NS		NS		NS		-	
		8	390		NS		NS		NS		NS		-		NS		NS		NS		-	
HA-7B	10/24/2018	SURFACE	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		17		<10.0		17	

TABLE 1  
 SUMMARY OF ANALYTICAL RESULTS  
 TRC 2018 SOIL ASSESSMENT - nAB1817150139  
 CONOCOPHILLIPS  
 CANVASBACK 13 FEDERAL #002H  
 EDDY COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth ft. bgs	Chloride <sup>1</sup> mg/kg Q		BTEX <sup>2</sup>								TPH <sup>3</sup>									
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		ORO		Total TPH	
					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
N-1	6/19/2018	0.5	<25.0											NS		NS		NS		-		
N-2	6/19/2018	1.5	51.4											NS		NS		NS		-		
S-1	6/20/2018	0.5	66.4			NS		NS		NS		-		NS		NS		NS		-		
S-2	6/20/2018	1.5	<25.0			NS		NS		NS		-		NS		NS		NS		-		
E-1	6/20/2018	0.5	<b>1,050</b>			NS		NS		NS		-		NS		NS		NS		-		
E-2	6/20/2018	1.5	<25.0			NS		NS		NS		-		NS		NS		NS		-		
E-3	6/20/2018	3.5	30.7			NS		NS		NS		-		NS		NS		NS		-		
W-1	6/20/2018	0.5	370			NS		NS		NS		-		NS		NS		NS		-		
W-2	6/20/2018	0.5	228			NS		NS		NS		-		NS		NS		NS		-		
W-3	6/20/2018	0.5	<25.0			NS		NS		NS		-		NS		NS		NS		-		
W-4	6/20/2018	0.5	<25.0			NS		NS		NS		-		NS		NS		NS		-		

NOTES:

- ft. Feet
- bgs Below ground surface
- mg/kg Milligrams per kilogram
- TPH Total Petroleum Hydrocarbons
- GRO Gasoline range organics
- DRO Diesel range organics
- MRO Motor Oil range organics
- NS Sample not analyzed for parameter
- 1 EPA Method 300.0
- 2 EPA Method 8021B
- 3 Method SW8015 Mod

***Bold and italicized values indicate exceedance of proposed RRALs and/or reclamation requirements.***

QUALIFIERS:

D: The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample

TABLE 2  
 SUMMARY OF ANALYTICAL RESULTS  
 TRC 2019 SOIL REMEDIATION - nAB1817150139  
 CONOCOPHILLIPS  
 CANVASBACK 13 FEDERAL #002H  
 EDDY COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride <sup>1</sup>		BTEX <sup>2</sup>										TPH <sup>3</sup>						
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)
					mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	
A1-FL1	4/12/2019	1	112		NS		NS		NS		NS		NS		NS		NS		NS		-
A1-FL2	4/12/2019	1	112		NS		NS		NS		NS		NS		NS		NS		NS		-
A1-FL3	4/12/2019	1	32.0		<0.050		<0.050		<0.050		0.221		<0.300		<10.0		<10.0		<10.0		-
A1-FL4	4/12/2019	1	176		NS		NS		NS		NS		NS		NS		NS		NS		-
A1-NW	4/12/2019	0.5	80.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A1-EW	4/12/2019	0.5	32.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
A1-SW	4/12/2019	0.5	48.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A1-WW	4/12/2019	0.5	64.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-FL1	4/12/2019	1.5	<b>784</b>		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-FL-1*	4/16/2019	4	960		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-FL2	4/12/2019	1.5	144		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
A2-FL3	4/12/2019	1.5	160		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-FL4	4/12/2019	0.75	<b>1,470</b>		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-FL-4*	4/16/2019	4	720		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-NW	4/12/2019	0.75	32.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-EW1	4/12/2019	0.75	64.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-EW2	4/12/2019	0.75	80.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
A2-SW	4/12/2019	0.75	32.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-WW1	4/12/2019	0.75	176		NS		NS		NS		NS		NS		NS		NS		NS		-
A2-WW2	4/12/2019	0.75	256		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL1	4/12/2019	1	<b>832</b>		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL-1*	4/16/2019	1.5	256		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL2	4/12/2019	1	<b>1,040</b>		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL-2*	4/16/2019	1.5	2,280		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL3	4/12/2019	1	32.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL4	4/12/2019	1	<b>1,310</b>		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
A3-FL-4*	4/16/2019	1.5	1,580		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL5	4/12/2019	1	176		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL6	4/12/2019	1	112		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL7	4/12/2019	1	48.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL8	4/12/2019	1	48.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-FL9	4/12/2019	1	32.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
A3-FL10	4/12/2019	1	80.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-NW	4/12/2019	0.5	80.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-EW1	4/12/2019	0.5	48.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-EW2	4/12/2019	0.5	80.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-SW	4/12/2019	0.5	32.0		NS		NS		NS		NS		NS		NS		NS		NS		-
A3-WW1	4/12/2019	0.5	32.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10		<10		<10		-
A3-WW2	4/12/2019	0.5	<16.0		NS		NS		NS		NS		NS		NS		NS		NS		-

NOTES:

- ft. Feet
- bgs Below ground surface
- mg/kg Milligrams per kilogram
- TPH Total Petroleum Hydrocarbons
- GRO Gasoline range organics
- DRO Diesel range organics
- NS Not analyzed for parameters
- 1 Method SM4500CI-B
- 2 Method 8021B
- 3 Method 8015M

**Bold and italicized values indicate exceedance of proposed RRALs and/or reclamation requirements.**

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.

TABLE 3  
 SUMMARY OF ANALYTICAL RESULTS  
 TT 2023 ADDITIONAL SOIL ASSESSMENT- nAB1817150139  
 CONOCOPHILLIPS  
 CANVASBACK 13 FEDERAL #002H  
 EDDY COUNTY, NM

Sample ID	Sample Date	Sample Depth	Field Screening Results	Chloride <sup>1</sup>		BTEX <sup>2</sup>								TPH <sup>3</sup>								
						Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)
			Chloride	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	
AH-23-1	5/8/2023	0-1	42.3	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
AH-23-1	5/8/2023	0-1	54.7	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
		2-3	101	32.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
AH-23-3	5/8/2023	0-1	36.8	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
AH-23-4	5/8/2023	0-1	64.1	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
		2-3	96	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-

NOTES:

- ft. Feet
- bgs Below ground surface
- mg/kg Milligrams per kilogram
- TPH Total Petroleum Hydrocarbons
- GRO Gasoline range organics
- DRO Diesel range organics
- 1 Method SM4500Cl-B
- 2 Method 8021B
- 3 Method 8015M

***Bold and italicized values indicate exceedance of proposed RRALs and/or reclamation requirements.***

# **APPENDIX A C-141 Forms**

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

State of New Mexico  
Energy Minerals and Natural Resources

JUN 14 2018

Form C-141  
Revised April 3, 2017

Oil Conservation Division DISTRICT II-ARTESIA, OCD  
1220 South St. Francis Dr.  
Santa Fe, NM 87505  
Please file this report with the appropriate District Office in accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

*NAB1817150139*

**OPERATOR**

Initial Report  Final Report

Name of Company: COG Production, LLC (OGRID #217955)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland, TX 79701	Telephone No. 432-683-7443
Facility Name: Canvasback 13 Federal #002H	Facility Type: Flowline

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-40538
------------------------	------------------------	----------------------

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	13	24S	31E					Eddy

Latitude 32.214831 Longitude -103.722968 NAD83

**NATURE OF RELEASE**

Type of Release Produced Water	Volume of Release 25 bbl.	Volume Recovered 0 bbl.
Source of Release Flowline Leak	Date and Hour of Occurrence June 13, 2018 2:00pm	Date and Hour of Discovery June 13, 2018 2:00pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher - NMOCD Crystal Weaver - NMOCD Henryetta Price - BLM	
By Whom? Sheldon Hitchcock	Date and Hour: June 13, 2018 4:08pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
The release was caused by a flowline rupture. The flowline is being replaced.

Describe Area Affected and Cleanup Action Taken.\*  
The release was in the pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant 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 NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>DeAnn Grant</i>		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: DeAnn Grant		Approved by Environmental Specialist: <i>Mike Bratcher</i>	
Title: HSE Administrative Assistant	Approval Date: <i>6/15/18</i>	Expiration Date: <i>N/A</i>	
E-mail Address: agrant@concho.com	Conditions of Approval: <i>See Attached</i>		Attached <input type="checkbox"/> <i>JRP-4813</i>
Date: June 14, 2018	Phone: (432) 253-4513		

\* Attach Additional Sheets If Necessary

Incident ID	
District RP	2RP-4813
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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-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 I of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	2RP-4813
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: Rebecca Haskell

Title: Senior HSE Coordinator

Signature: Rebecca Haskell

Date: 4/25/19

email: rhaskell@concho.com

Telephone: 432-818-2372

**OCD Only**

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

Date: \_\_\_\_\_

Incident ID	
District RP	2RP-4813
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: Rebecca Haskell Title: Senior HSE Coordinator  
 Signature: Rebecca Haskell Date: 4/25/19  
 email: rhaskell@concho.com Telephone: 432-818-2372

**OCD Only**

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

- Approved       Approved with Attached Conditions of Approval       Denied       Deferral Approved

Signature: Buttan Hall Date: 11/28/2022

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 161588

**CONDITIONS**

Operator: COG PRODUCTION, LLC 600 W. Illinois Ave Midland, TX 79701	OGRID: 217955
	Action Number: 161588
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

**CONDITIONS**

Created By	Condition	Condition Date
bhall	Deferral of contamination located at and around HA-7 approved until retrofit of area or abandonment of site, which ever comes first. Closure of incident not approved until area of HA-7 remediated. A complete closure report for the release will need to be submitted when all remediation is completed.	11/28/2022
bhall	2RP-4813 closed. Please refer to incident #NAB1817150139 for future communication.	11/28/2022

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: Moises H Cantu Garcia Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: Michael Buchanan 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.

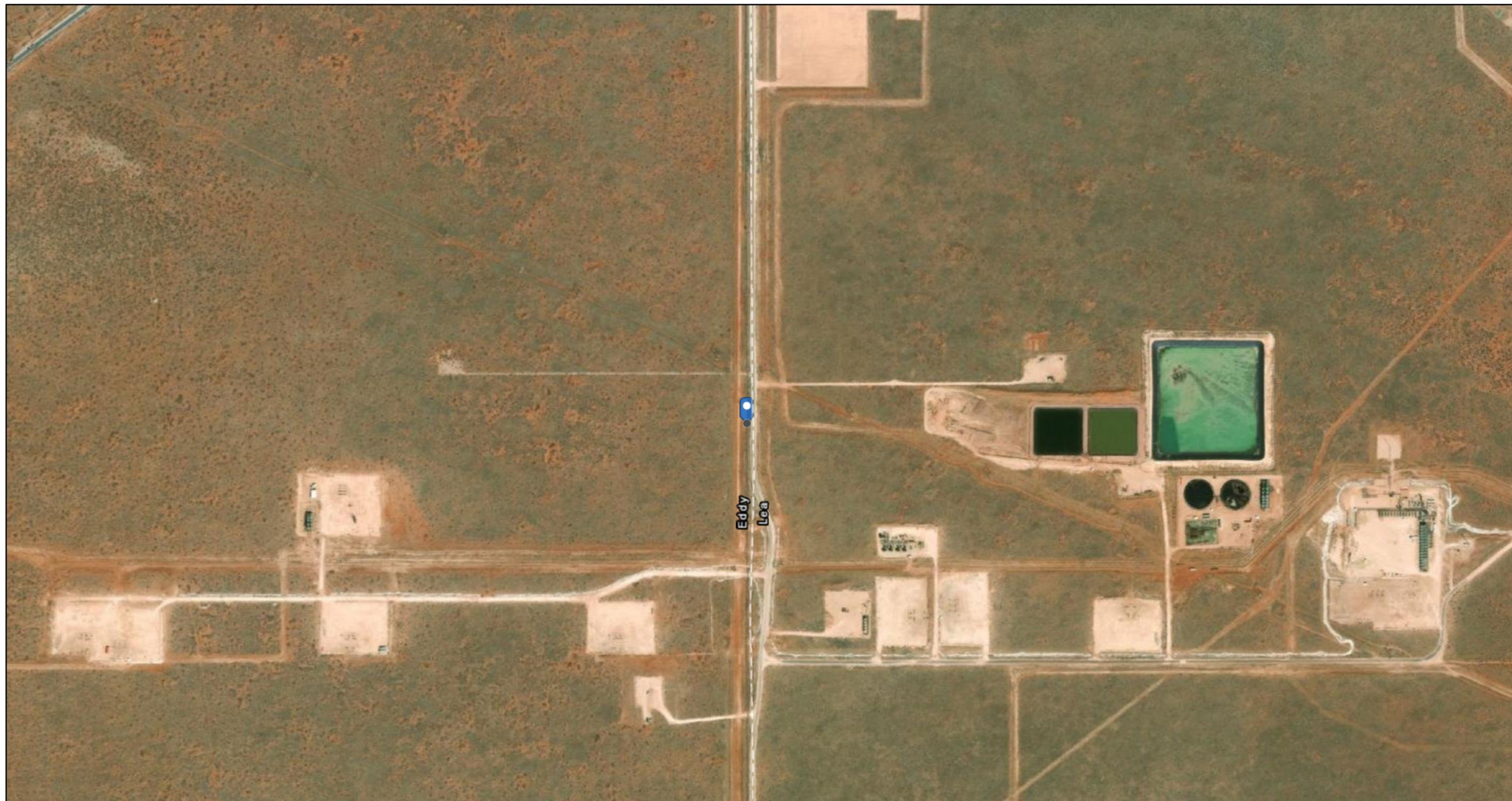
Closure Approved by: Brittany Hall Date: 5/24/2023

Printed Name: Brittany Hall Title: Environmental Specialist

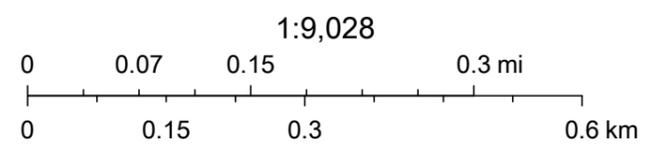
# **APPENDIX B**

## **Site Characterization Data**

# OCD Waterbodies Map



2/8/2023, 3:11:59 PM



Esri, HERE, Garmin, IPC, Maxar, NM OSE

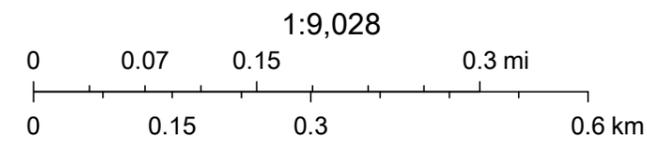
# OCD Karst Potential Map



2/8/2023, 3:10:48 PM

Karst Occurrence Potential

Low



BLM, OCD, New Mexico Tech, Esri, HERE, Garmin, iPC, Maxar



# 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-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">C 03530 POD1</a>	C	LE		3	4	3	07	24S	32E	620886	3566156	1348	550		
<a href="#">C 04687 POD1</a>	CUB	ED		4	2	3	12	24S	31E	619481	3566450	1751	110		
<a href="#">C 04665</a>	CUB	LE		1	1	2	30	24S	32E	621350	3562798	2352	120		
<a href="#">C 04576 POD1</a>	CUB	ED		1	2	1	23	24S	31E	617700	3564324	2708	910	850	60
<a href="#">C 04388 POD1</a>	C	ED		3	2	1	23	24S	31E	617546	3564006	2941	910	868	42

Average Depth to Water: **859 feet**  
 Minimum Depth: **850 feet**  
 Maximum Depth: **868 feet**

**Record Count: 5**

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

**Easting (X):** 620341

**Northing (Y):** 3564923.58

**Radius:** 3200

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

# **APPENDIX C**

## **Regulatory Correspondence**

**Poole, Nicholas**

---

**From:** OCDOnline@state.nm.us  
**Sent:** Monday, November 28, 2022 12:55 PM  
**To:** Beauvais, Charles R  
**Subject:** [EXTERNAL]The Oil Conservation Division (OCD) has approved the application, Application ID: 161588

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

To whom it may concern (c/o Charles Beauvais for COG PRODUCTION, LLC),

The OCD has approved the submitted *Internal Manual Incident File Supporting Documentation (ENV)* (IM-BNF), for incident ID (n#) nAB1817150139, with the following conditions:

- **Deferral of contamination located at and around HA-7 approved until retrofit of area or abandonment of site, which ever comes first. Closure of incident not approved until area of HA-7 remediated. A complete closure report for the release will need to be submitted when all remediation is completed.**
- **2RP-4813 closed. Please refer to incident #NAB1817150139 for future communication.**

The signed IM-BNF can be found in the OCD Online: Imaging under the incident ID (n#).

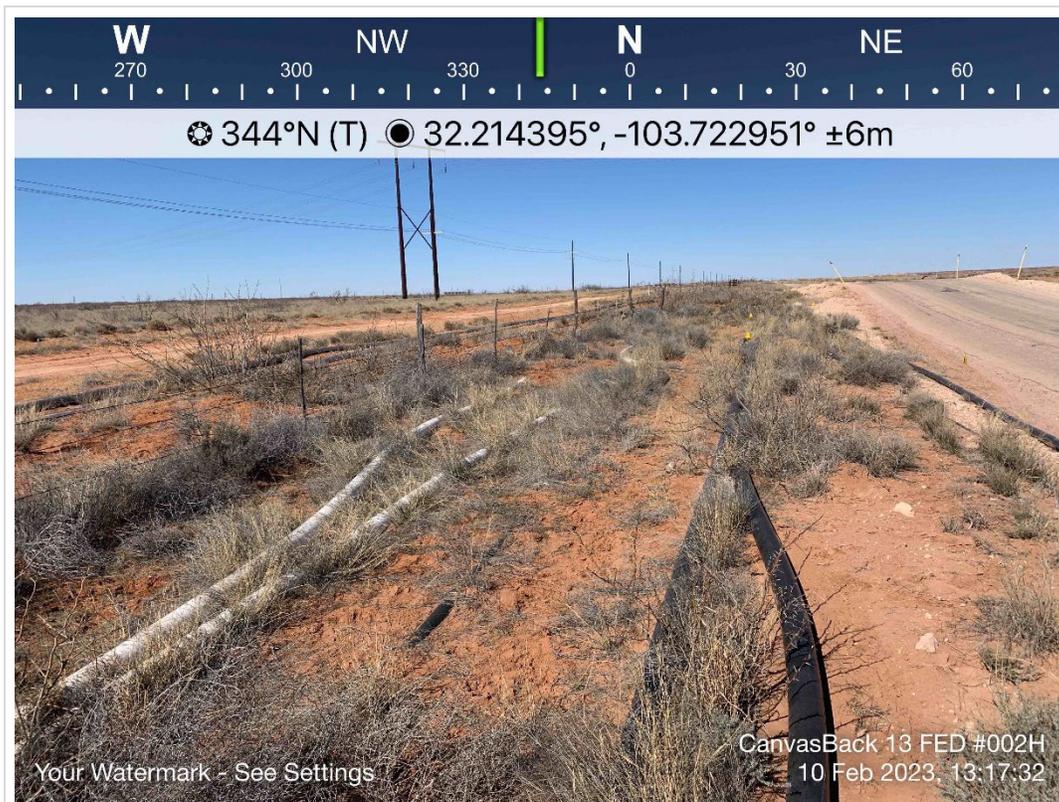
If you have any questions regarding this application, please contact me.

Thank you,  
Brittany Hall  
Projects Environmental Specialist - A  
505-517-5333  
Brittany.Hall@emnrd.nm.gov

**New Mexico Energy, Minerals and Natural Resources Department**  
1220 South St. Francis Drive  
Santa Fe, NM 87505

# **APPENDIX D**

## **Photographic Documentation**



TETRA TECH, INC. PROJECT NO. 212C-MD-03003	DESCRIPTION	View north/northwest of surface polylines and fence line.	1
	SITE NAME	Canvasback 13 Fed #002H	2/10/2023



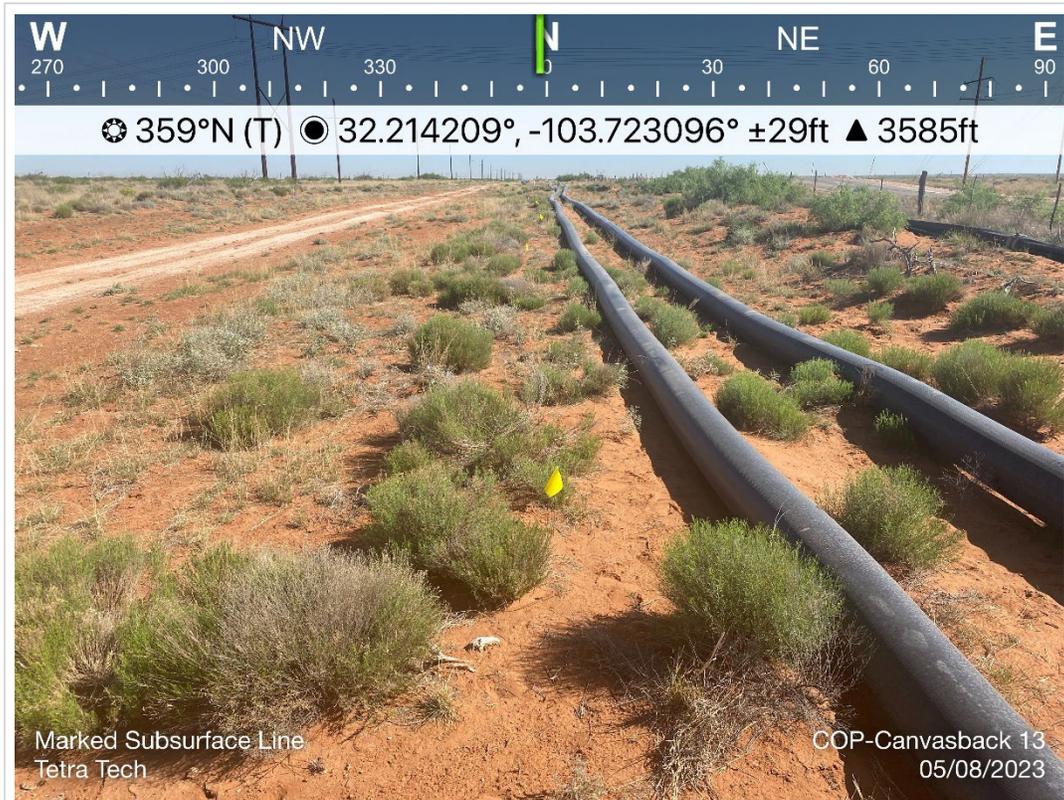
TETRA TECH, INC. PROJECT NO. 212C-MD-03003	DESCRIPTION	View south/southwest of surface polylines and fence line.	2
	SITE NAME	Canvasback 13 Fed #002H	2/10/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03003	DESCRIPTION	View south/southeast of surface polylines and fence line.	3
	SITE NAME	Canvasback 13 Fed #002H	2/10/2023



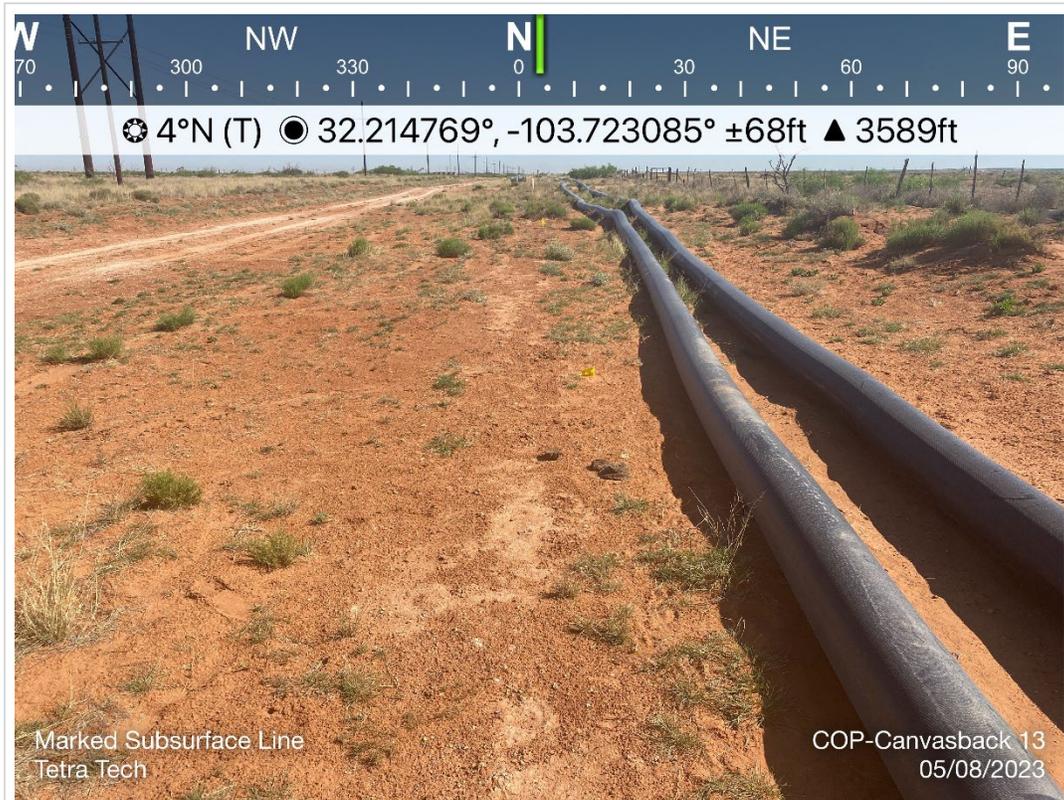
TETRA TECH, INC. PROJECT NO. 212C-MD-03003	DESCRIPTION	View south of general Site conditions. Surface polylines shown to the east.	4
	SITE NAME	Canvasback 13 Fed #002H	2/10/2023



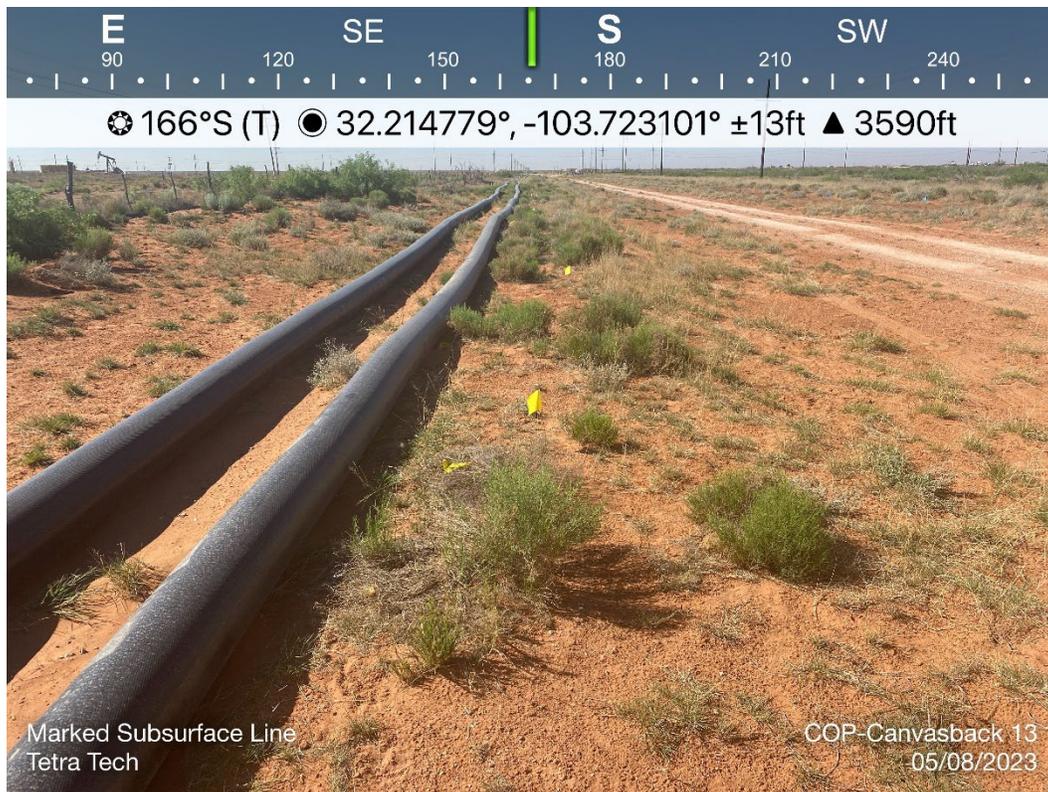
TETRA TECH, INC. PROJECT NO. 212C-MD-03003	DESCRIPTION	View north. View of surface poly lines and fence. View of HA-7 area to the right of line. Vegetation present.	5
	SITE NAME	Canvasback 13 Fed #002H	5/8/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03003	DESCRIPTION	View north. View of previously remediated area. Vegetation present.	6
	SITE NAME	Canvasback 13 Fed #002H	5/8/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03003	DESCRIPTION	View north. View of surface poly line and fence.	7
	SITE NAME	Canvasback 13 Fed #002H	5/8/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03003	DESCRIPTION	View south. View of surface lines and previously remediated area. Vegetation present.	8
	SITE NAME	Canvasback 13 Fed #002H	5/8/2023

# **APPENDIX E**

## **Laboratory Analytical Data**



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

---

May 12, 2023

SAM ABBOTT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: CANVASBACK 13 FEDERAL #002H

Enclosed are the results of analyses for samples received by the laboratory on 05/09/23 15:00.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	05/09/2023	Sampling Date:	05/08/2023
Reported:	05/12/2023	Sampling Type:	Soil
Project Name:	CANVASBACK 13 FEDERAL #002H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03003	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NEW MEXICO		

**Sample ID: AH-23-1 (0-1') (H232303-01)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2023	ND	1.96	98.1	2.00	2.42	
Toluene*	<0.050	0.050	05/10/2023	ND	2.00	99.9	2.00	0.369	
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.10	105	2.00	0.651	
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.25	104	6.00	0.900	
Total BTEX	<0.300	0.300	05/10/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/10/2023	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/10/2023	ND	161	80.4	200	2.41	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	157	78.6	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 84.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.4 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	05/09/2023	Sampling Date:	05/08/2023
Reported:	05/12/2023	Sampling Type:	Soil
Project Name:	CANVASBACK 13 FEDERAL #002H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03003	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NEW MEXICO		

**Sample ID: AH-23-2 (0-1') (H232303-02)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/10/2023	ND	1.96	98.1	2.00	2.42		
Toluene*	<0.050	0.050	05/10/2023	ND	2.00	99.9	2.00	0.369		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.10	105	2.00	0.651		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.25	104	6.00	0.900		
Total BTEX	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/10/2023	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/10/2023	ND	161	80.4	200	2.41		
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	157	78.6	200	6.06		
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND						

Surrogate: 1-Chlorooctane 84.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 97.6 % 49.1-148

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	05/09/2023	Sampling Date:	05/08/2023
Reported:	05/12/2023	Sampling Type:	Soil
Project Name:	CANVASBACK 13 FEDERAL #002H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03003	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NEW MEXICO		

**Sample ID: AH-23-2 (2'-3') (H232303-03)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2023	ND	1.96	98.1	2.00	2.42	
Toluene*	<0.050	0.050	05/10/2023	ND	2.00	99.9	2.00	0.369	
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.10	105	2.00	0.651	
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.25	104	6.00	0.900	
Total BTEX	<0.300	0.300	05/10/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/10/2023	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/10/2023	ND	161	80.4	200	2.41	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	157	78.6	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 83.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 96.2 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	05/09/2023	Sampling Date:	05/08/2023
Reported:	05/12/2023	Sampling Type:	Soil
Project Name:	CANVASBACK 13 FEDERAL #002H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03003	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NEW MEXICO		

**Sample ID: AH-23-3 (0-1') (H232303-04)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/10/2023	ND	1.96	98.1	2.00	2.42		
Toluene*	<0.050	0.050	05/10/2023	ND	2.00	99.9	2.00	0.369		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.10	105	2.00	0.651		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.25	104	6.00	0.900		
Total BTEX	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/10/2023	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/10/2023	ND	161	80.4	200	2.41		
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	157	78.6	200	6.06		
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND						

Surrogate: 1-Chlorooctane 83.2 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.7 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	05/09/2023	Sampling Date:	05/08/2023
Reported:	05/12/2023	Sampling Type:	Soil
Project Name:	CANVASBACK 13 FEDERAL #002H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03003	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NEW MEXICO		

**Sample ID: AH-23-4 (0-1') (H232303-05)**

BTEX 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/10/2023	ND	1.96	98.1	2.00	2.42	
Toluene*	<0.050	0.050	05/10/2023	ND	2.00	99.9	2.00	0.369	
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.10	105	2.00	0.651	
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.25	104	6.00	0.900	
Total BTEX	<0.300	0.300	05/10/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/10/2023	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/10/2023	ND	161	80.4	200	2.41	
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	157	78.6	200	6.06	
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND					

Surrogate: 1-Chlorooctane 84.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 95.6 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	05/09/2023	Sampling Date:	05/08/2023
Reported:	05/12/2023	Sampling Type:	Soil
Project Name:	CANVASBACK 13 FEDERAL #002H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03003	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NEW MEXICO		

**Sample ID: AH-23-4 (2'-3') (H232303-06)**

BTEX 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/10/2023	ND	1.96	98.1	2.00	2.42		
Toluene*	<0.050	0.050	05/10/2023	ND	2.00	99.9	2.00	0.369		
Ethylbenzene*	<0.050	0.050	05/10/2023	ND	2.10	105	2.00	0.651		
Total Xylenes*	<0.150	0.150	05/10/2023	ND	6.25	104	6.00	0.900		
Total BTEX	<0.300	0.300	05/10/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/10/2023	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	05/10/2023	ND	161	80.4	200	2.41		
DRO >C10-C28*	<10.0	10.0	05/10/2023	ND	157	78.6	200	6.06		
EXT DRO >C28-C36	<10.0	10.0	05/10/2023	ND						

Surrogate: 1-Chlorooctane 63.9 % 48.2-134

Surrogate: 1-Chlorooctadecane 77.1 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Notes and Definitions**

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

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Celey D. Keene, Lab Director/Quality Manager



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

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

**BILL TO**

**ANALYSIS REQUEST**

Company Name: Tetra Tech		P.O. #:		ANALYSIS REQUEST	
Project Manager: Sam Abbott		Company: Tetra Tech			
Address: 8911 Capital o Texas Hwy, Suite 2310		Attn: Sam Abbott			
City: Austin		Address: EMAIL			
Phone #: (512)565-0190		City:			
Fax #: 212C-MD-03003		State:			
Project #: 212C-MD-03003		Zip:			
Project Name: Canvasback 13 Federal #002H		Project Owner: ConocoPhillips			
Project Location: Eddy County, New Mexico		Phone #:			
Sampler Name: Colton Bickerstaff		Fax #:			
Lab I.D.		PRESERV.		SAMPLING	
Sample I.D.		MATRIX		DATE	
		GROUNDWATER		TIME	
		WASTEWATER		TPH 8015M	
		SOIL		BTEX 8021B	
		OIL		Chloride SM4500CI-B	
		SLUDGE			
		OTHER :			
		ACID/BASE:			
		ICE / COOL			
		OTHER :			
AH-23-1 (0-1')		G 1		5/8/2023	
AH-23-2 (0-1')		G 1		5/8/2023	
AH-23-2 (2-3')		G 1		5/8/2023	
AH-23-3 (0-1')		G 1		5/8/2023	
AH-23-4 (0-1')		G 1		5/8/2023	
AH-23-4 (2-3')		G 1		5/8/2023	

FOR USE ONLY

Verbal Result:  Yes  No Add'l Phone #: Sam.Abbott@tetratech.com

REMARKS:

Thermometer ID #113

Correction Factor -0.5°C

Thermometer ID #113

Correction Factor -0.5°C

Thermometer ID #113

Correction Factor -0.5°C

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

FORM-006 R.3.2.10/07/21

**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 219466

**CONDITIONS**

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 219466
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
bhall	Closure approved. Site will need to meet the requirements of 19.15.29.13 NMAC.	5/24/2023