



October 4, 2023

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

**Re: Revised Release Characterization and Deferral Request
ConocoPhillips (Heritage COG Operating LLC)
On behalf of Spur Energy Partners, LLC
Patton 5 Fee #002H Tank Battery Release
Unit Letter D, Section 5, Township 19 South, Range 26 East
Eddy County, New Mexico
Incident ID# nAB1801851398**

Ms. Hall:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips Company (ConocoPhillips) to assess and evaluate current conditions associated a historical COG Operating LLC release that occurred at the tank battery located on the Patton 5 Fee #002H lease pad (API No. 30-015-39815). The release footprint is located in Public Land Survey System (PLSS) Unit Letter D, Section 5, Township 19 South, Range 26 East, in Eddy County, New Mexico (Site). The approximate release point occurred at coordinates 32.6943321°, -104.4119949°, as shown on Figures 1 and 2. The Site is located on private land. The Site is currently operated by Spur Energy Partners, LLC (Spur).

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report, the release occurred on January 7, 2018, when a 1-inch valve on the circulating pump failed "due to fluid and sand cut", resulting in the release of approximately 65 barrels (bbls) of oil. Vacuum trucks were utilized to recover approximately 58 bbls of oil during the initial response. The release occurred inside the berm and on the pad area, as shown on Figure 3. The NMOCD approved the initial C-141 on November 16, 2018, and subsequently assigned the release the Incident ID nAB1801851398. The initial C-141 form is included in Appendix A.

This incident is included in an Agreed Compliance Order-Releases (ACO-R) between COG Operating LLC (Concho) and the NMOCD signed on November 20 and 26, 2018, respectively.

SITE CHARACTERIZATION

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

There is a United States Geological Survey (USGS) water well located within 0.5-miles (800 meters) of the site. According to data from the USGS water well listed in the NMOCD Oil and Gas Map database the depth

Tetra Tech

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to groundwater is 63.5 feet below ground surface (bgs). The site characterization data are presented 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 was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

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

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

2018 INITIAL SITE ASSESSMENT

COG Operating, LLC (Concho) conducted the initial Site assessment activities on January 24, 2018. Three (3) sample trenches (T-1 through T-3) to 2 feet and 3 feet bgs were installed on the lease pad west of the berm to obtain the vertical extent of the release. Three (3) hand auger borings to 1 foot bgs (north, south, and west) were installed to determine the horizontal extent of the release.

Concho returned to the site on March 21, 2018, to conduct additional site assessment activities. Four (4) hand auger borings (AH-1 through AH-4) were installed within the tank battery berm ranging from 0.5 feet bgs to 2 feet bgs. Additional hand auger borings (North, South, East-1, East-2, and West) were installed to obtain horizontal delineation. Initial assessment sampling locations are presented in Figure 3.

A total of twenty-eight (28) soil samples were collected from the twelve (12) boreholes and three (3) trenches and sent to Xenco Laboratories in Midland, Texas and to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chloride via EPA Method 300.0/4500, TPH via EPA Method 8015M, and BTEX via EPA Method 8261B.

Analytical results associated with sample locations T-1, T-2, AH-1, and AH-3 exceeded the total TPH RRAL of 2,500 mg/kg as well as the GRO+DRO RRAL of 1,000 mg/kg. Analytical results from the January 2018 and March 2018 initial assessment activities are summarized in Tables 1 and 2, respectively.

Concho summarized the 2018 assessment activities in a Work Plan dated October 22, 2018. The Work Plan proposed excavation of the facility areas represented by sample locations AH-1 and AH-3 to a depth of approximately 1 to 2 feet bgs. The pad areas represented by sample locations T-1 and T-2 would be excavated to depths of 1 and 2 feet bgs, respectively. A copy of the 2018 Work Plan is available on the NMOCD online incident files.

The Work Plan was approved by NMOCD on May 2, 2023, with the following comments:

- *"Composite confirmation samples representative of 600 square feet denied. OCD approved confirmation sample representative of no more than 400 square feet.*
- *Base and side wall samples will need to be analyzed for all the constituents of Table 1 in 19.15.29 NMAC.*
- *Submit a complete report though the OCD Permitting website by 8/2/2023.*
- *2RP-4572 closed. Refer to incident #NAB1801851398 in all future communication."*

JUNE 2023 ADDITIONAL SITE ASSESSMENT AND SAMPLING RESULTS

Based on the Work Plan approval, Tetra Tech conducted additional soil sampling at the Site on behalf of ConocoPhillips to assess the current soil concentration levels within the reported release footprint prior to remedial action. On June 2, 2023, Tetra Tech installed two (2) hand auger borings (AH-23-1 and AH-23-2) in the reported release extent in the areas of the former 2018 trench locations T-1 and T-2, as indicated on Figure 4. Photographic documentation from the June 2023 additional soil sampling activities is presented in Appendix D.

A total of four (4) soil samples were collected from the two borings and were sent to Cardinal Laboratories in Hobbs, New Mexico (Cardinal) 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 is included in Appendix E.

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

RELEASE CHARACTERIZATION AND DEFERRAL REQUEST AND NMOCD REJECTION

A Release Characterization and Deferral Request report based on the results of the additional assessment was submitted to the NMOCD on July 6, 2023. The deferral request was rejected by Brittany Hall via email on July 14, 2023 for the following reasons:

- *"Deferral denied. The [contamination] in AH-3 has not been vertically delineated. OCD also questions the "liner integrity" as the battery containment appears to be incomplete as shown in the pictures included in the report. There are no pictures provided that show the integrity of the liner at the dirt bermed wall of the containment.*
- *Submit a complete report through the OCD Permitting website by 10/14/2023."*

A copy of the regulatory correspondence is included in Appendix C.

AUGUST 2023 ADDITIONAL SITE ASSESSMENT AND SAMPLING RESULTS

In accordance with the NMOCD directives, Tetra Tech returned to the Site to complete vertical delineation at the AH-3 location and to take additional photographs demonstrating liner integrity at the earthen bermed wall of the containment. On August 31, 2023, Tetra Tech installed one (1) hand auger boring (AH-23-3) in the same location as the previously collected AH-3, as indicated on Figure 4. While onsite, the facility liner and earthen berm were inspected and found to be intact. Photographic documentation from the August 2023 additional soil sampling activities is presented in Appendix D.

A total of two (2) soil samples were collected from the boring and sent to Cardinal 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 is included in Appendix E.

Analytical results from the June 2023 additional assessment activities are summarized in Table 3. All analytical results associated with AH-23-3 were below the applicable Site RRALs for all constituents.

CONCLUSION

Additional sampling and a liner inspection were conducted at the Site in August 2023 to comply with comments provided by NMOCD with the Deferral Request rejection. The analytical results associated with the additional sampling at the AH-3 location indicate that the area is no longer impacted with TPH above Site RRALs. This change is attributed to natural degradation of TPH due to the age of the release. A similar trend has been observed in the areas of T-1/AH-23-1 and T-2/AH-23-2. Additionally, photographs of the liner at the earthen bermed wall of the containment indicate that the liner and berm are intact as of August 2023.

Revised Release Characterization and Deferral Request
October 4, 2023

ConocoPhillips

All previous analytical results associated with the horizontal delineation to the east, south, and west of the release area were below the applicable Site RRALs for all constituents. Both horizontal and vertical delineation of the release was achieved during the assessment sampling activities. Depth to groundwater was verified and groundwater is not present at 50 feet bgs or less. Based on contemporaneous sampling of the formerly impacted areas, the on pad remedial action approved in the Work Plan is no longer necessary.

As mentioned, the Site is currently operated by Spur and the battery is active. The approved Work Plan noted that the tanks and equipment inside the lined containment were to be removed to access the impacted soils and to repair and replace the liner. Due to maintaining the current integrity of the liner and based on the proximity to oil and gas production equipment, ConocoPhillips respectfully requests that further remediation of soils within the lined area of the facility with concentrations exceeding the Site RRAL of 1,000 mg/kg for TPH (GRO+DRO) be deferred until facility deconstruction. The area requested for deferral is indicated in Figure 4.

Remediation of the battery and final reclamation of the well pad shall take place in accordance with 19.15.29.13 NMAC once the Site is no longer being used for oil and gas operations. The final C-141 forms are enclosed in Appendix A. If you have any questions 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. Ike Tavarez, RMR – ConocoPhillips
Mr. Braidy Moulder, Spur

LIST OF ATTACHMENTS

Figures:

- Figure 1 – Overview Map
- Figure 2 – Topographic Map
- Figure 3 – Approximate Release Extent and Site Assessment (Concho)
- Figure 4 – Additional Assessment (Tetra Tech)

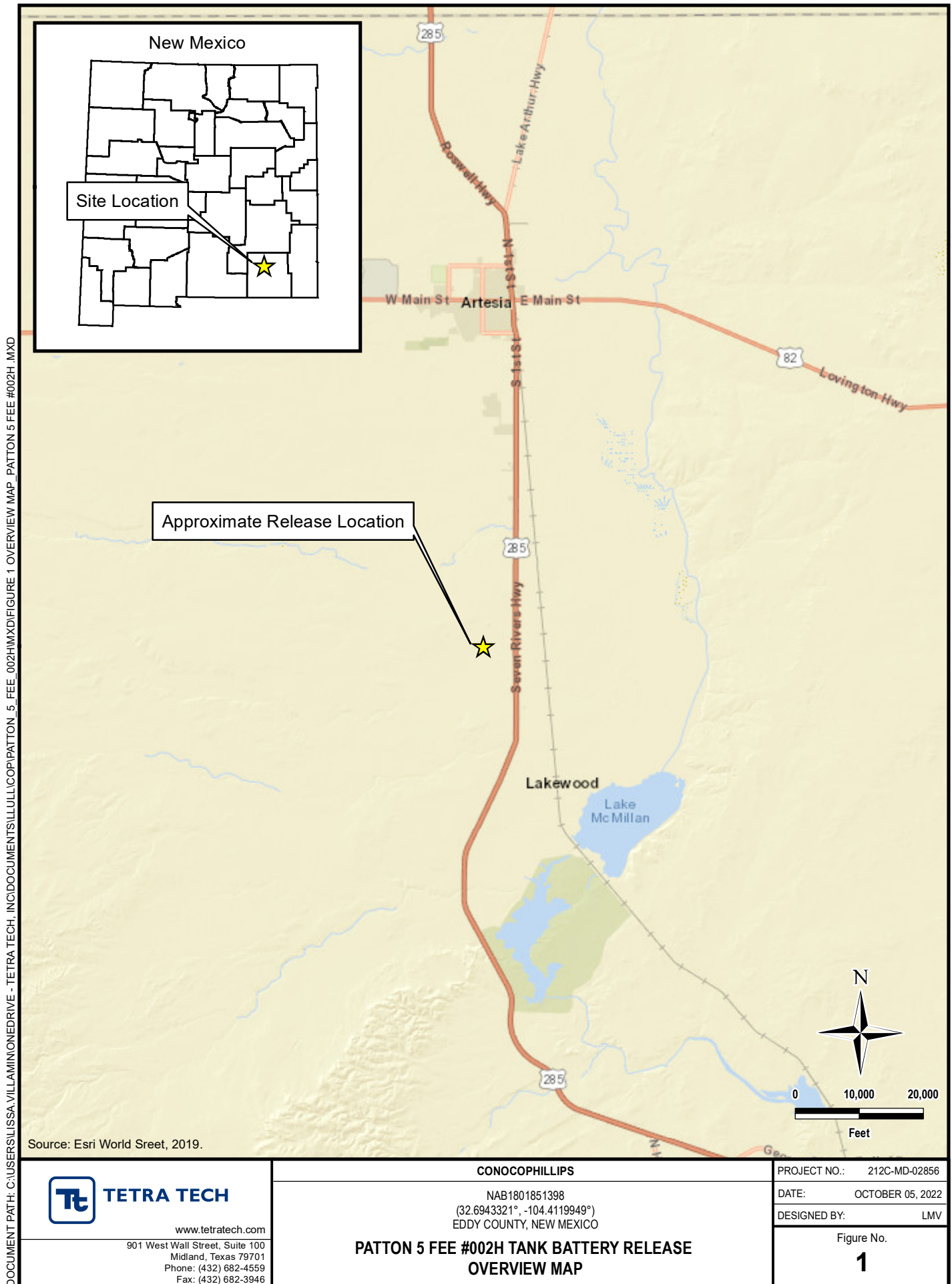
Tables:

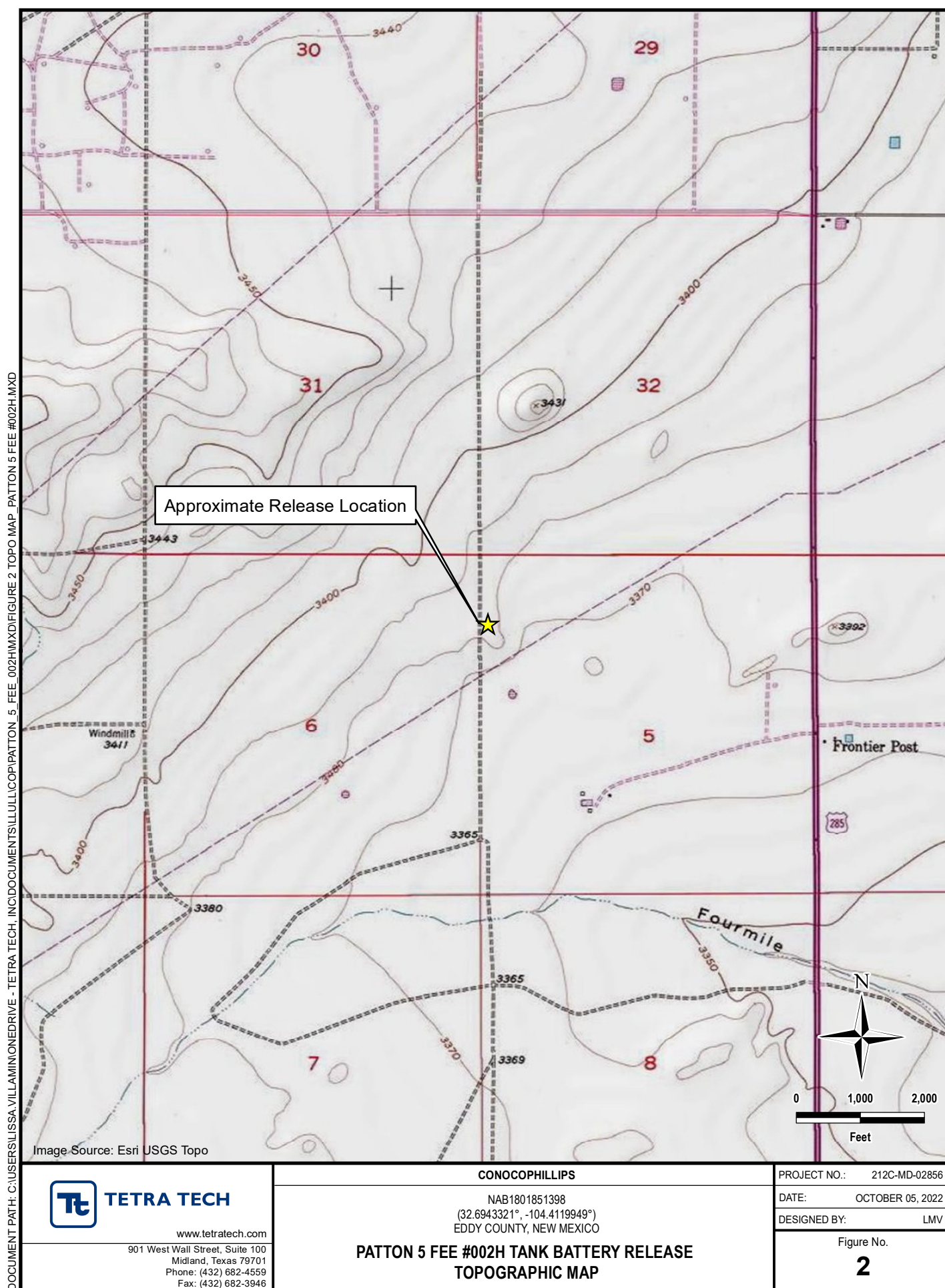
- Table 1 – Summary of Analytical Results – January 2018 Soil Assessment
- Table 2 – Summary of Analytical Results – March 2018 Soil Assessment
- Table 3 – Summary of Analytical Results – 2023 Additional Soil Assessment

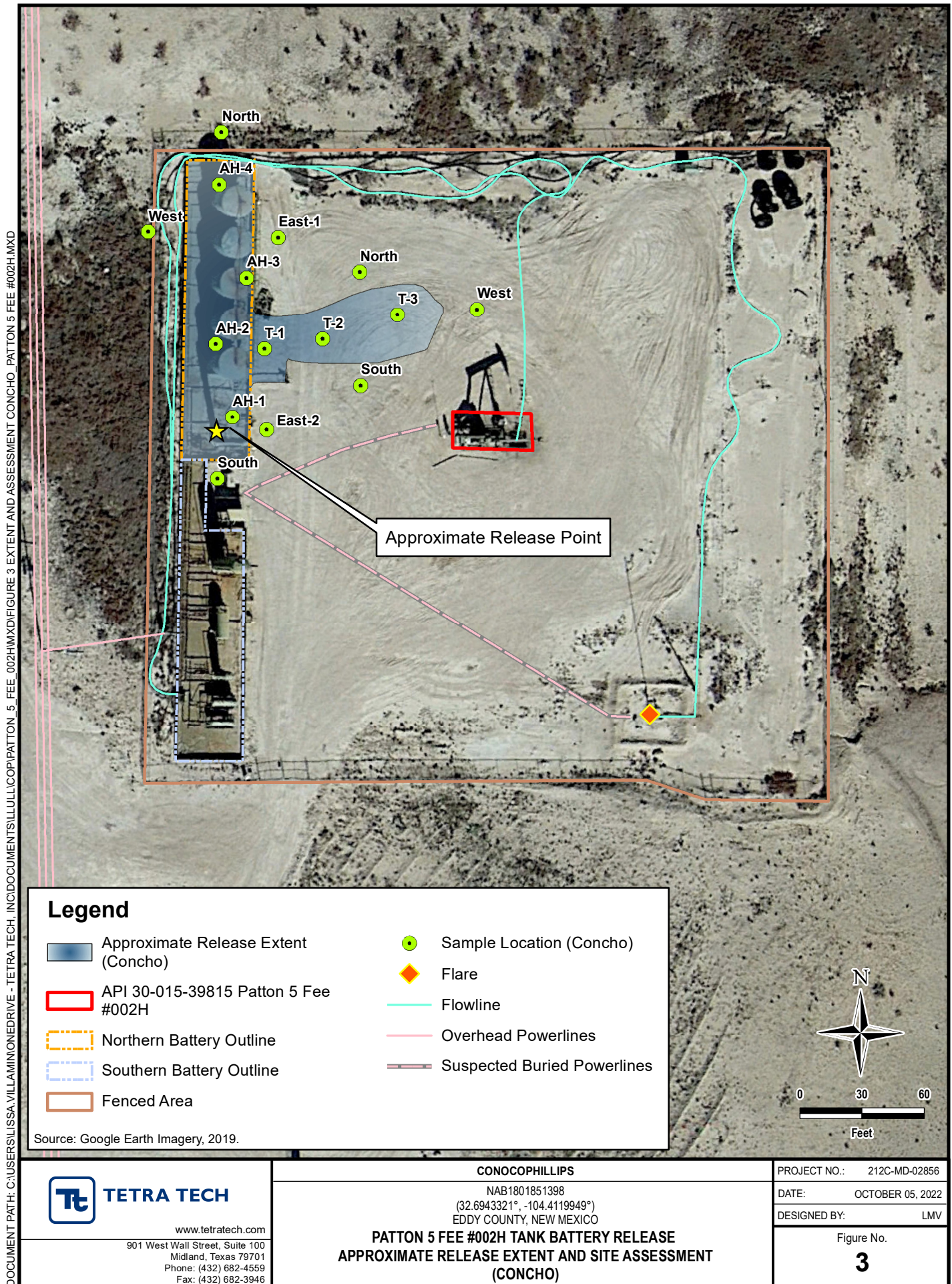
Appendices:

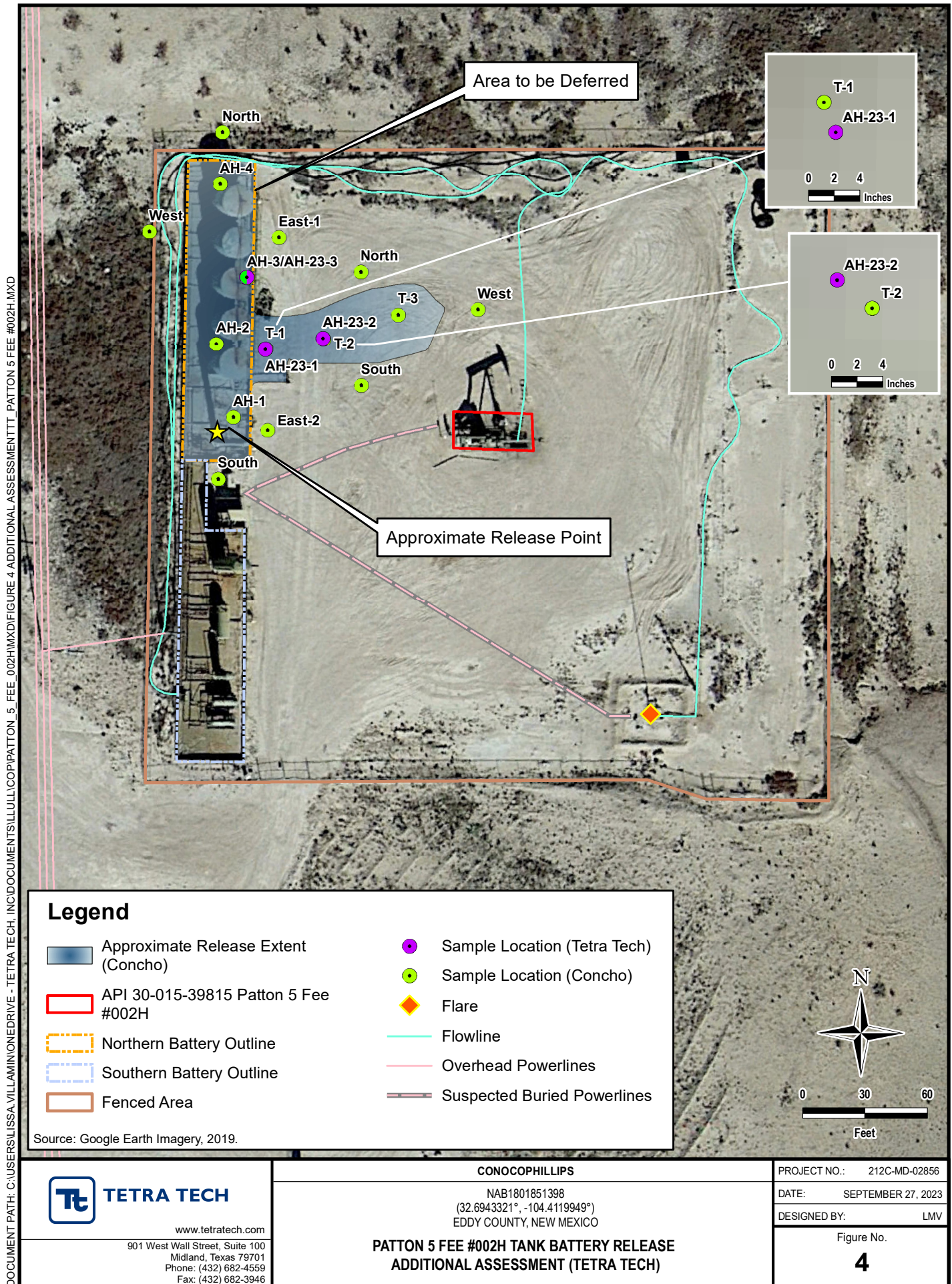
- Appendix A – C-141 Forms
- Appendix B – Site Characterization Data
- Appendix C – Regulatory Correspondence
- Appendix D – Photographic Documentation
- Appendix E – Laboratory Analytical Data

FIGURES









TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
JANUARY 2018 SOIL ASSESSMENT - 2RP-4572 / nAB1801851398
CONOCOPHILLIPS
PATTON 5 FEE #002H TANK BATTERY RELEASE
EDDY COUNTY, NM

Sample ID	Sample Date	Sample Depth	Chloride ¹			BTEX ²												TPH ³																				
						Benzene		Toluene		Ethylbenzene		m,p-Xylenes		o-Xylene		Total Xylenes		Total BTEX		GRO		DRO		ORO		GRO+DRO		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	mg/kg	Q	mg/kg	Q	mg/kg	Q									
T-1	1/24/2018	0		92.1			8.10			80.9			71.9			93.2			36.6			130			291			1,300			2530			299			3830	4130
		1		NA			< 0.0100			< 0.0100			< 0.0100			< 0.0200			< 0.0100			< 0.0100			< 0.0100			< 15.0			< 15.0			< 15.0	< 15.0			
		2		NA			< 0.0100			< 0.0100			< 0.0100			< 0.0200			< 0.0100			< 0.0100			< 0.0100			< 15.0			< 15.0			< 15.0	< 15.0			
T-2	1/24/2018	0		NA			< 0.00200			< 0.00200			< 0.00200			< 0.00399			0.00324			0.00324			0.00324			40.3			2350			499			2390	2890
		1		NA			< 0.00200			< 0.00200			< 0.00200			< 0.00401			< 0.00200			< 0.00200			< 0.00200			< 14.9			< 14.9			< 14.9	< 14.9			
		2		NA			< 0.00200			< 0.00200			< 0.00200			< 0.00401			< 0.00200			< 0.00200			< 0.00200			< 14.9			< 14.9			< 14.9	< 14.9			
		3		120			< 0.0100			< 0.0100			< 0.0100			< 0.0200			< 0.0100			< 0.0100			< 0.0100			< 15.0			< 15.0			< 15.0	< 15.0			
T-3	1/24/2018	0		3,990			< 0.00200			< 0.00200			< 0.00200			< 0.00399			< 0.00200			< 0.00200			< 0.00200			< 15.0			< 15.0			< 15.0	< 15.0			
		1		465			< 0.00201			< 0.00201			< 0.00201			< 0.00402			< 0.00201			< 0.00201			< 0.00201			< 15.0			< 15.0			< 15.0	< 15.0			
		2		NA			< 0.00200			< 0.00200			< 0.00200			< 0.00401			< 0.00200			< 0.00200			< 0.00200			< 15.0			< 15.0			< 15.0	< 15.0			
		3		NA			< 0.00199			< 0.00199			< 0.00199			< 0.00398			< 0.00199			< 0.00199			< 0.00199			< 15.0			< 15.0			< 15.0	< 15.0			
NORTH	1/24/2018	0.5		7.79			< 0.00199			< 0.00199			< 0.00199			< 0.00398			< 0.00199			< 0.00199			< 0.00199			< 15.0			< 15.0			< 15.0	< 15.0			
SOUTH	1/24/2018	0.5		366			< 0.00201			< 0.00201			< 0.00201			< 0.00402			< 0.00201			< 0.00201			< 0.00201			< 15.0			< 15.0			< 15.0	< 15.0			
WEST	1/24/2018	0.5		206			< 0.00200			< 0.00200			< 0.00200			< 0.00399			< 0.00200			< 0.00200			< 0.00200			< 15.0			< 15.0			< 15.0	< 15.0			

NOTES:

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

Bold and italicized values indicate exceedance of proposed Site RRLs.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
MARCH 2018 SOIL ASSESSMENT - 2RP-4572 / nAB1801851398
CONOCOPHILLIPS
PATTON 5 FEE #002H TANK BATTERY RELEASE
EDDY COUNTY, NM

Sample ID	Sample Date	Sample Depth	Chloride ¹		BTEX ²										TPH ³									
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		GRO+DRO	Total TPH (GRO+DRO+EXT DRO)		
															C ₆ - C ₁₀		> C ₁₀ - C ₂₈		> C ₂₈ - C ₃₆					
		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	mg/kg		
AH-1	3/20/2018	0	15.2		< 0.050		0.628		0.381		2.05		3.06		18.1		182		33.2		200.1	233		
		1	NA		19.4		117		70.6		119		325		941		2,780		397		3721	4,118		
		1.6	NA		0.241		2.99		1.65		6.88		11.8		68.8		682		130		750.8	881		
AH-2	3/20/2018	0	440		0.086		0.215		0.068		< 0.150		0.369		< 10.0		< 10.0		10.1		< 10.0	10.1		
AH-3	3/20/2018	0	62.7		0.068		3.69		4.42		18.2		26.4		271		2720		472		2991	3,463		
		0.5	NA		< 0.050		0.079		< 0.050		5.57		5.65		114		1410		265		1524	1,789		
AH-4	3/20/2018	0	41.9		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		14.6		< 10.0	14.6		
		1	NA		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	-		
		2	NA		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	-		
NORTH	3/20/2018	0	225		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	-		
EAST-1	3/20/2018	0	152		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		139		14.7		139	154		
EAST-2	3/20/2018	0	138		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		53.6		< 10.0		53.6	53.6		
SOUTH	3/20/2018	0	468		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	-		
WEST	3/20/2018	0	12.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 10.0	-		

NOTES:

- ft. Feet
bgs Below ground surface
mg/kg Milligrams per kilogram
TPH Total Petroleum Hydrocarbons
GRO Gasoline range organics
DRO Diesel range organics
NA Sample not analyzed for parameter
1 Method 300.0
2 Method 8021
3 Method 8015B

Bold and italicized values indicate exceedance of proposed RRALs.

TABLE 3
SUMMARY OF ANALYTICAL RESULTS
2023 SOIL ASSESSMENT- nAB1801851398
CONOCOPHILLIPS
PATTON 5 FEE #002H TB RELEASE
EDDY COUNTY, NM

Sample ID	Sample Date	Sample Depth	Field Screening Results		Chloride ¹		BTEX ²										TPH ³							
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)	
																	C ₆ - C ₁₀		> C ₁₀ - C ₂₈		> C ₂₈ - C ₃₆			
		ft. bgs	ppm		mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	
AH-23-1	6/2/2023	0-1	-	5.5	176		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		141		30.1		171.1	
		1-2	-	7.7	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		27.8		<10.0		27.8	
AH-23-2	6/2/2023	0-1	-	4.8	224		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		13.0		<10.0		13.0	
		1-2	-	2.1	176		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
AH-23-3	8/31/2023	0-1	-	-	528		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	
		1-2	-	-	144		<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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NM OIL CONSERVATION

ARTESIA DISTRICT

JAN 12 2018

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

Form C-141
Revised April 3, 2017

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating, LLC (OGRID# 229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No.: 432-683-7443
Facility Name: Patton 5 Fee #002H	Facility Type: Tank Battery
Surface Owner: Fee	Mineral Owner: Private
API No.: 30-015-39815	

LOCATION OF RELEASE

Unit Letter D	Section 5	Township 19S	Range 26E	Feet from the 1040	North/South Line North	Feet from the 330	East/West Line West	County Eddy
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Latitude: 32.6943321 Longitude: -104.4119949 NAD83

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 65bbls	Volume Recovered: 58bbls
Source of Release: Valve	Date and Hour of Occurrence: 1/7/2018	Date and Hour of Discovery: 1/7/2018 11:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Crystal Weaver-NMOCD	
By Whom? Sheldon Hitchcock	Date and Hour: 1/7/2018 1:50pm	
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.*		
A 1-inch valve on circulating pump failed due to fluid and sand cut. The valve was replaced.		
Describe Area Affected and Cleanup Action Taken.*		
All of the fluid remained on location. A vacuum truck was utilized to recover freestanding fluids. Concho will have the spill area evaluated for 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.		

OIL CONSERVATION DIVISION

Signature: <i>Sheldon Hitchcock</i>	Approved by Environmental Specialist: <i>Crystal Weaver</i>	
Printed Name: Sheldon L. Hitchcock		
Title: HSE Coordinator	Approval Date: 1/16/18	Expiration Date: NIA
E-mail Address: slhitchcock@concho.com	Conditions of Approval: <i>see attached</i>	
Date: 1/12/2018 Phone: 575-746-2010	Attached <input checked="" type="checkbox"/> ARP 4572	

* Attach Additional Sheets If Necessary

1/16/18 AB

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	1RP-4572
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party COG Operating LLC	OGRID
Contact Name Robert McNeill	Contact Telephone 432-683-7443
Contact email rmcneill@concho.com	Incident # (assigned by OCD)
Contact mailing address 600 West Illinois Avenue, Midland, TX 79701	

Location of Release Source

Latitude 32.6943321 Longitude -104.4119949
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Patton 5 Fee 2H	Site Type Tank Battery
Date Release Discovered 1/7/2018	API# (if applicable) 30-025-40352

Unit Letter	Section	Township	Range	County
D	5	19S	26E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 65	Volume Recovered (bbls) 58
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
1 Inch valve on a circulating pump failed due to fluid and sand cut. The valve was repaired.


State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP 4572
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Over 25 bbls released
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? 1/7/18 at 11:30 am: Dakota Hitchcock - COG Crystal Weaver - NMOCD	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped.	
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Ike Tavaréz</u>	Title: <u>Senior HSE Supervisor</u>
Signature: 	Date: <u>10/24/18</u>
email: <u>itavaréz@concho.com</u>	Telephone: <u>432-683-7443</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

Incident ID	
District RP	2RP 4572
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	50'-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
515 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 checked="" type="checkbox"/> Yes <input 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 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

Page 4

Incident ID	
District RP	2RP 4572
Facility ID	
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Ike Tavaréz Title: Senior HSE Supervisor

Signature:  Date: 10/24/18

email: itavarez@concho.com Telephone: 432-683-7443

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP 4572
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: Ike Tavarez Title: Senior HSE Supervisor

Signature:  Date: _____

email: itavarez@concho.com Telephone: 432-683-7443

OCD Only

Received by: _____ Date: _____

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

Signature:  Date: 5/2/2023

Incident ID	nab1801851398
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
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Printed Name: Ike Tavarez _____ Title: Program Manager, Remediation _____
Signature:  _____ Date: 7/6/2023 _____
email: Ike.Tavarez@conocophillips.com _____ Telephone: 432-685-2573 _____

OCD Only

Received by: Shelly Wells _____ Date: 7/7/2023 _____

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

Signature:  _____ Date: 7/14/2023 _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan


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

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

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

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Printed Name: _____ Title: _____
Signature:  Date: _____
email: _____ Telephone: _____

OCD Only

Received by: Shelly Wells Date: 10/5/2023

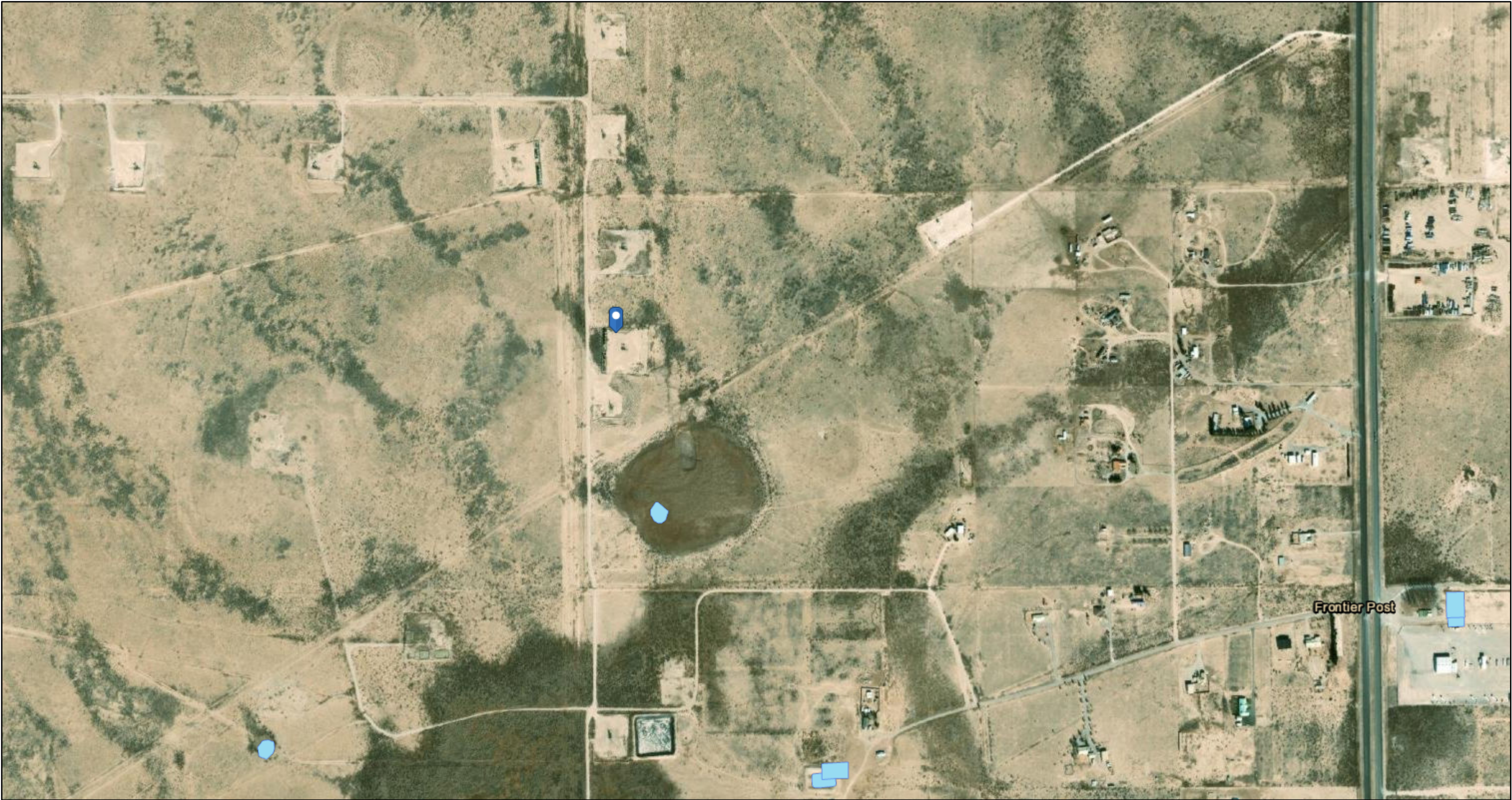
☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved
with conditions

Signature: Shelly Wells Date: 11/21/2023

APPENDIX B

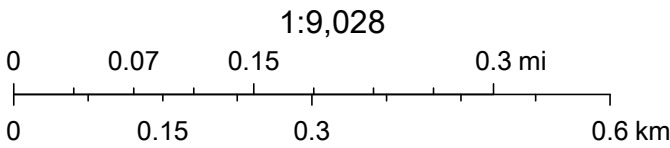
Site Characterization Data

OCD Waterbodies Map



9/26/2022, 11:58:01 AM

OSW Water Bodys



Esri, HERE, Garmin, GeoTechnologies, Inc., Maxar, NM
OSE

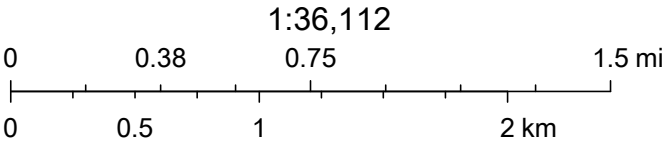
OCD Potential Karst Map



9/26/2022, 11:55:55 AM

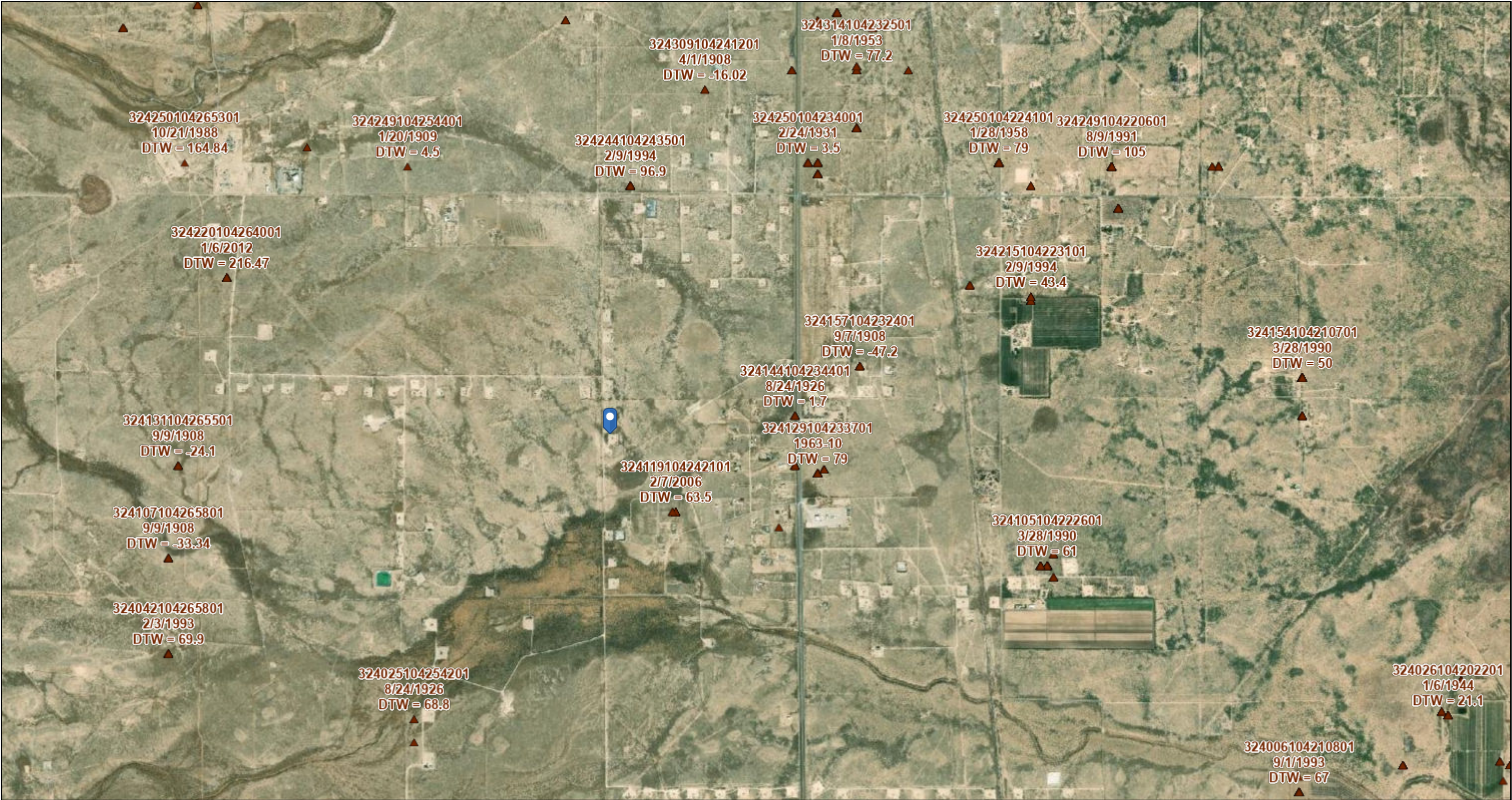
Karst Occurrence Potential

- Medium
- Low



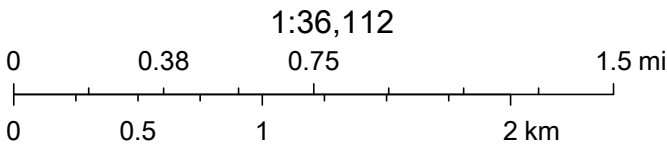
BLM, OCD, New Mexico Tech, Esri, HERE, Garmin, Maxar

USGS Groundwater Wells



6/8/2023, 10:57:08 AM

▲ USGS Historical GW Wells



Esri, HERE, Garmin, USGS, 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
RA 07066	RA	ED		3	4	1	05	19S	26E	555561	3617166*	589	202	100	102
RA 07066 POD2	RA	ED		4	4	1	05	19S	26E	555761	3617166*	751	150		
RA 08098	RA	ED		3	1	2	05	19S	26E	555959	3617571*	841	215	100	115
RA 08315	RA	ED		3	1	2	05	19S	26E	555959	3617571*	841	195	100	95
RA 07954	RA	ED		3	2	3	05	19S	26E	555566	3616763*	909	290	175	115
RA 07260	RA	ED			1	2	05	19S	26E	556060	3617672*	949	198	100	98
RA 11633 POD1	RA	ED		2	1	2	05	19S	26E	556059	3617756	962	180	130	50
RA 07165	RA	ED			3	2	05	19S	26E	556065	3617269*	988	193	110	83
RA 07508	RA	ED			3	2	05	19S	26E	556065	3617269*	988	185	150	35
RA 10133	RA	ED			3	2	05	19S	26E	556065	3617269*	988	177	138	39

Average Depth to Water: **122 feet**

Minimum Depth: **100 feet**

Maximum Depth: **175 feet**

Record Count: 10

UTMNAD83 Radius Search (in meters):

Easting (X): 555118

Northing (Y): 3617554.18

Radius: 1000

*UTM location was derived from PLSS - see Help

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.

9/26/22 11:05 AM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

APPENDIX C

Regulatory Correspondence

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 205965

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 205965
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	Composite confirmation samples representative of 600 square feet denied. OCD approved confirmation sample representative of no more than 400 square feet.	5/2/2023
bhall	Base and side wall samples will need to be analyzed for all the constituents of Table 1 in 19.15.29 NMAC.	5/2/2023
bhall	Submit a complete report though the OCD Permitting website by 8/2/2023.	5/2/2023
bhall	2RP-4572 closed. Refer to incident #NAB1801851398 in all futre communication.	5/2/2023

From: OCDOnline@state.nm.us
To: [Lull, Christian](#)
Date: Friday, July 14, 2023 12:27:20 PM

CAUTION: This email originated from an external sender. Verify the source before opening links or attachments.

To whom it may concern (c/o Christian Lull for COG OPERATING LLC),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAB1801851398, for the following reasons:

- **Deferral denied. The containment in AH-3 has not been vertically delineated. OCD also questions the "liner integrity" as the battery containment appears to be incomplete as shown in the pictures included in the report. There are no pictures provided that show the integrity of the liner at the dirt bermed wall of the containment.**
- **Submit a complete report through the OCD Permitting website by 10/14/2023.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 236928.

Please review and make the required correction(s) prior to resubmitting.

If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

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-02856	DESCRIPTION	View of Site Signage.	1
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View northwest. View of production equipment and historical release area.	2
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View southwest. View of historic release area and production equipment.	3
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023



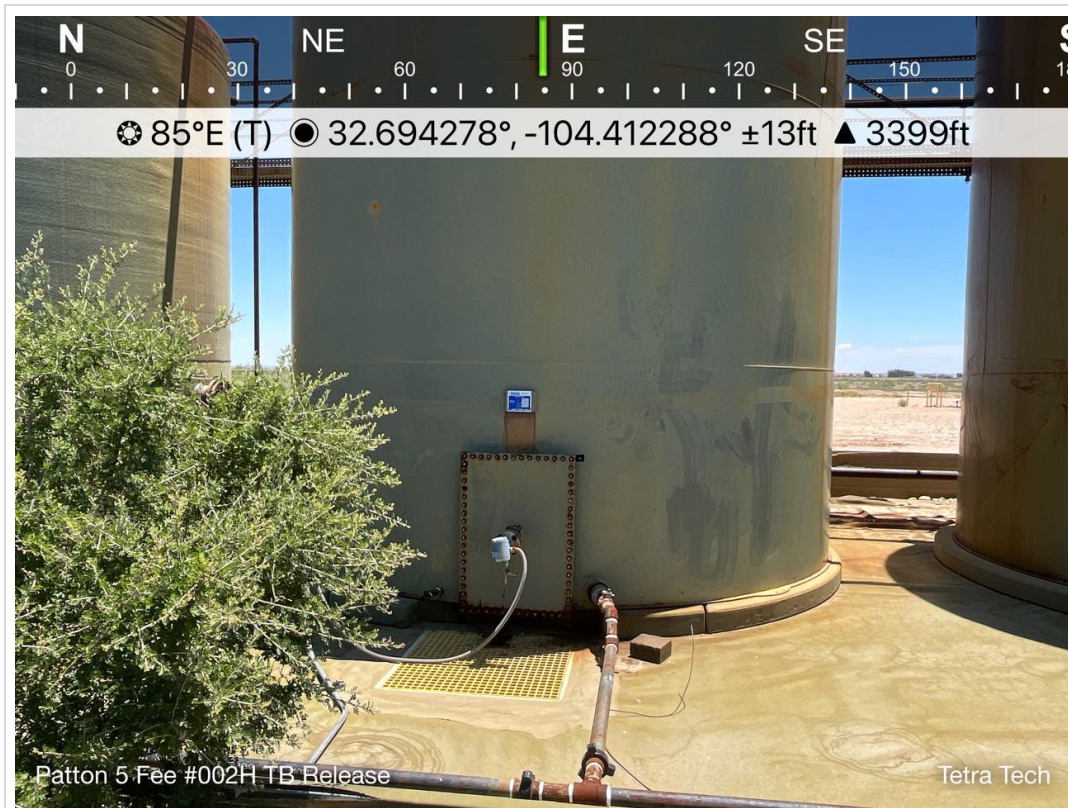
TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View north. View of historic release area. View of production equipment.	4
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023



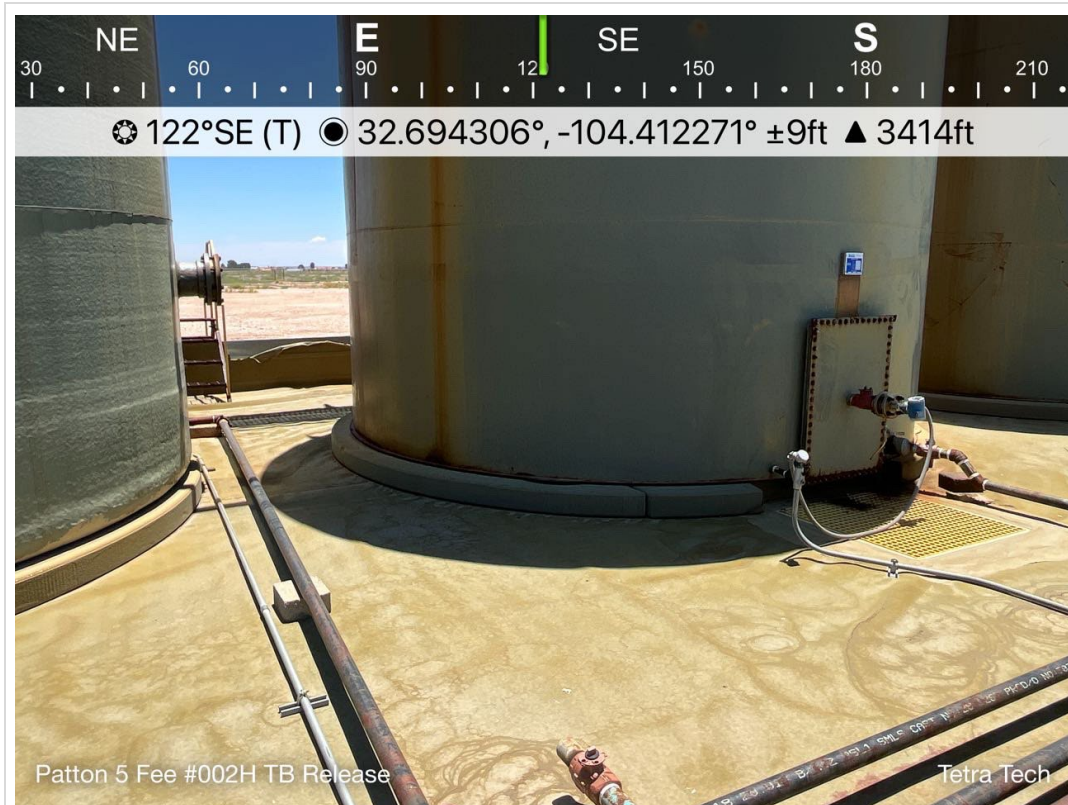
TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View southeast. View of current pad conditions and historical release area.	5
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View south. View of inside the tank battery of historic release area. Liner present and intact.	6
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View east. View of inside the tank battery. Liner present and intact.	7
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View southeast. View of production equipment. Liner present and intact.	8
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View northeast. View of intact liner. Production equipment present.	9
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View southeast. View of production equipment. Liner present and intact.	10
	SITE NAME	Patton 5 Fee #002H TB Release	7/3/2023





TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View west. View dirt bermed wall of tank battery.	12
	SITE NAME	Patton 5 Fee #002H TB Release	8/31/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-02856	DESCRIPTION	View southwest. View dirt bermed wall of tank battery.	13
	SITE NAME	Patton 5 Fee #002H TB Release	8/31/2023

APPENDIX E

Laboratory Analytical Data



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

June 07, 2023

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: PATTON 5 FEE #002H TB RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 06/02/23 11:55.

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

Cardinal Laboratories is 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, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	06/02/2023	Sampling Date:	06/02/2023
Reported:	06/07/2023	Sampling Type:	Soil
Project Name:	PATTON 5 FEE #002H TB RELEASE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02856	Sample Received By:	Tamara Oldaker
Project Location:	COP - EDDY CO NM		

Sample ID: AH - 23 - 1 (0-1') (H232795-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2023	ND	2.19	109	2.00	4.37	
Toluene*	<0.050	0.050	06/02/2023	ND	2.26	113	2.00	6.78	
Ethylbenzene*	<0.050	0.050	06/02/2023	ND	2.49	124	2.00	1.28	
Total Xylenes*	<0.150	0.150	06/02/2023	ND	7.45	124	6.00	1.63	
Total BTEX	<0.300	0.300	06/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	176	16.0	06/02/2023	ND	416	104	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	06/02/2023	ND	180	90.1	200	2.71	
DRO >C10-C28*	141	10.0	06/02/2023	ND	171	85.4	200	3.35	
EXT DRO >C28-C36	30.1	10.0	06/02/2023	ND					

Surrogate: 1-Chlorooctane 97.6 % 48.2-134

Surrogate: 1-Chlorooctadecane 107 % 49.1-148

Cardinal Laboratories

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

Received:	06/02/2023	Sampling Date:	06/02/2023
Reported:	06/07/2023	Sampling Type:	Soil
Project Name:	PATTON 5 FEE #002H TB RELEASE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02856	Sample Received By:	Tamara Oldaker
Project Location:	COP - EDDY CO NM		

Sample ID: AH - 23 - 2 (0-1') (H232795-02)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/02/2023	ND	2.19	109	2.00	4.37		
Toluene*	<0.050	0.050	06/02/2023	ND	2.26	113	2.00	6.78		
Ethylbenzene*	<0.050	0.050	06/02/2023	ND	2.49	124	2.00	1.28		
Total Xylenes*	<0.150	0.150	06/02/2023	ND	7.45	124	6.00	1.63		
Total BTEx	<0.300	0.300	06/02/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	224	16.0	06/02/2023	ND	416	104	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	06/02/2023	ND	180	90.1	200	2.71	
DRO >C10-C28*	13.0	10.0	06/02/2023	ND	171	85.4	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	06/02/2023	ND					

Surrogate: 1-Chlorooctane 92.7 % 48.2-134

Surrogate: 1-Chlorooctadecane 94.9 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

[illegible]**BILL TO**

ANALYSIS REQUEST

Relinquished By: Colton Bickstaff	Date: 6/22/23	Received By: 	Vertical Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: All Results are emailed. Please provide Email address: Christian.Lui@terratech.com
	Time: 1:55		
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.3 Corrected Temp. °C 1.7	Sample Condition Cool <input checked="" type="checkbox"/> Airtight <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: (Initials) TC
Transmitted Time: Standard  Backus (only) Sample Count: a Rush <input checked="" type="checkbox"/> NA, Standard <input type="checkbox"/> TAT <input type="checkbox"/> Cool Islet <input type="checkbox"/> Observed Temp. °C: Thermometer ID #113 <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> Corrected Temp. °C: Correction Factor 0.5°C			



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

June 07, 2023

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: PATTON 5 FEE #002H TB RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 06/02/23 11:55.

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

Cardinal Laboratories is 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, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	06/02/2023	Sampling Date:	06/02/2023
Reported:	06/07/2023	Sampling Type:	Soil
Project Name:	PATTON 5 FEE #002H TB RELEASE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02856	Sample Received By:	Tamara Oldaker
Project Location:	COP - EDDY CO NM		

Sample ID: AH - 23 - 1 (1'-2') (H232796-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/02/2023	ND	2.19	109	2.00	4.37	
Toluene*	<0.050	0.050	06/02/2023	ND	2.26	113	2.00	6.78	
Ethylbenzene*	<0.050	0.050	06/02/2023	ND	2.49	124	2.00	1.28	
Total Xylenes*	<0.150	0.150	06/02/2023	ND	7.45	124	6.00	1.63	
Total BTEX	<0.300	0.300	06/02/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	240	16.0	06/02/2023	ND	416	104	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	06/02/2023	ND	180	90.1	200	2.71	
DRO >C10-C28*	27.8	10.0	06/02/2023	ND	171	85.4	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	06/02/2023	ND					

Surrogate: 1-Chlorooctane 105 % 48.2-134

Surrogate: 1-Chlorooctadecane 108 % 49.1-148

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

Received:	06/02/2023	Sampling Date:	06/02/2023
Reported:	06/07/2023	Sampling Type:	Soil
Project Name:	PATTON 5 FEE #002H TB RELEASE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02856	Sample Received By:	Tamara Oldaker
Project Location:	COP - EDDY CO NM		

Sample ID: AH - 23 - 2 (1'-2') (H232796-02)

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	06/02/2023	ND	2.14	107	2.00	2.44		
Toluene*	<0.050	0.050	06/02/2023	ND	2.20	110	2.00	2.44		
Ethylbenzene*	<0.050	0.050	06/02/2023	ND	2.07	104	2.00	2.98		
Total Xylenes*	<0.150	0.150	06/02/2023	ND	6.42	107	6.00	3.14		
Total BTEX	<0.300	0.300	06/02/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	176	16.0	06/02/2023	ND	416	104	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	06/02/2023	ND	180	90.1	200	2.71	
DRO >C10-C28*	<10.0	10.0	06/02/2023	ND	171	85.4	200	3.35	
EXT DRO >C28-C36	<10.0	10.0	06/02/2023	ND					

Surrogate: 1-Chlorooctane 108 % 48.2-134

Surrogate: 1-Chlorooctadecane 110 % 49.1-148

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

September 06, 2023

SAM ABBOTT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: PATTON 5 FEE #002H TB RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 08/31/23 17:10.

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

Cardinal Laboratories is 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 with a large, stylized 'C' and 'K'.

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:	08/31/2023	Sampling Date:	08/31/2023
Reported:	09/06/2023	Sampling Type:	Soil
Project Name:	PATTON 5 FEE #002H TB RELEASE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02856	Sample Received By:	Tamara Oldaker
Project Location:	COP - EDDY CO NM		

Sample ID: AH-23-3 (0-1') (H234757-01)

BTEX 8021B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/01/2023	ND	1.98	98.8	2.00	0.316	
Toluene*	<0.050	0.050	09/01/2023	ND	2.34	117	2.00	0.840	
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.38	119	2.00	0.724	
Total Xylenes*	<0.150	0.150	09/01/2023	ND	7.12	119	6.00	0.577	
Total BTEX	<0.300	0.300	09/01/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	528	16.0	09/01/2023	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/02/2023	ND	195	97.6	200	3.72	
DRO >C10-C28*	<10.0	10.0	09/02/2023	ND	196	97.9	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	09/02/2023	ND					

Surrogate: 1-Chlorooctane 72.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 75.4 % 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:	08/31/2023	Sampling Date:	08/31/2023
Reported:	09/06/2023	Sampling Type:	Soil
Project Name:	PATTON 5 FEE #002H TB RELEASE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-02856	Sample Received By:	Tamara Oldaker
Project Location:	COP - EDDY CO NM		

Sample ID: AH-23-3 (1-2') (H234757-02)

BTEX 8021B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/01/2023	ND	1.98	98.8	2.00	0.316		
Toluene*	<0.050	0.050	09/01/2023	ND	2.34	117	2.00	0.840		
Ethylbenzene*	<0.050	0.050	09/01/2023	ND	2.38	119	2.00	0.724		
Total Xylenes*	<0.150	0.150	09/01/2023	ND	7.12	119	6.00	0.577		
Total BTEX	<0.300	0.300	09/01/2023	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	144	16.0	09/01/2023	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/02/2023	ND	195	97.6	200	3.72	
DRO >C10-C28*	<10.0	10.0	09/02/2023	ND	196	97.9	200	1.07	
EXT DRO >C28-C36	<10.0	10.0	09/02/2023	ND					

Surrogate: 1-Chlorooctane 67.5 % 48.2-134

Surrogate: 1-Chlorooctadecane 70.2 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

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

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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 272592

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 272592
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	Area under tank battery represented in Figure 3 is approved for deferral. Entire area under liner will need to be investigated at time of a major facility deconstruction or at plugging and abandonment, whichever comes first. The bermed wall and liner should be repaired and maintained in a manner that ensures integrity.	11/21/2023