



August 17, 2022

Bradford Billings
Hydrologist/E.Spec.A
District 2 Artesia
1220 South St. Francis Drive
Oil Conservation Division
Santa Fe, NM 87505

**Re: Closure Report
ConocoPhillips
Heritage Concho
Miller B Federal #003 Flowline Release
Unit Letter A, Section 23, Township 17 South, Range 32 East
Lea County, New Mexico
Incident ID# nOY1704058292
1RP-4597**

Mr. Billings,

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips to evaluate a Heritage Concho release and subsequent assessment activities performed at the Miller B Federal #003 Flowline Release site (API No. 30-025-31054). The release footprint is located in Public Land Survey System (PLSS) Unit Letter A, Section 23, Township 17 South, Range 32 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.8245583°, -103.7327499°, as shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico Oil Conservation Division (NMOCD) C-141 Initial Report, the release was discovered on February 1, 2017. The C-141 reports that the release was caused by a ruptured poly flowline from the Miller B Federal #003 well due to a buildup of paraffin. Approximately 7 barrels (bbls) of crude oil and 3 bbls of produced water were released in pasture, of which approximately 6 bbls of oil and 1 bbl of produced water were recovered. The release occurred on Bureau of Land Management (BLM) land. The NMOCD approved the initial C-141 on February 2, 2017 and subsequently assigned the release the Incident ID nOY1704058292 and the remediation permit (RP) number 1RP-4597. The initial C-141 form is included in Appendix A.

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 low karst potential.

There are no water wells listed in the New Mexico Office of the State Engineer (NMOSE) database located within approximately ½ mile (800 meters) of the site. According to data from three (3) water wells listed in the NMOSE database within approximately 1.86 miles (3,000 meters) of the site, the average depth to

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groundwater is 172 feet below ground surface (bgs), and the minimum depth to groundwater is 130 feet bgs.

The remediation action levels proposed for the site are largely dependent upon depth to groundwater. As such, the OCD focuses upon depth to water estimation. Thus, 19.15.11(A)(2) NMAC allows for various means of determining depth to groundwater.

For this release, as the water level information available in the NMOSE database was from a well further than ½ mile away from the Site, ConocoPhillips elected to reference a boring that was drilled to supplement the depth to groundwater determination at another former release Site. A licensed well drilling subcontractor was contracted by Tetra Tech to drill a groundwater determination borehole at a nearby release site on March 23, 2020. The borehole (BH-4) was installed to a depth of 60 feet bgs at the MCA 123 Injection Line Release site, located approximately 1 mile from the Miller B #3 release Site at coordinates 32.810847°, -103.743217°. The borehole was dry upon completion, and soils were dry from surface to total depth. The depth to groundwater in the area was thus verified as greater than 60 feet bgs. The borehole was plugged with 3/8-inch bentonite chips on March 23, 2020. The site characterization data, including the MCA 123 Injection Line Release BH-4 boring log, 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, established depth to groundwater, and in accordance with Table I of 19.15.29.12 NMAC, the RRALs for the Site are as follows:

Constituent	Site RRALs
Chloride	20,000 mg/kg
TPH	2,500 mg/kg
BTEX	50 mg/kg

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

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

INITIAL RESPONSE ACTIVITIES AND SITE ASSESSMENT

Following the release, Concho recovered freestanding fluids using a vacuum truck and replaced the ruptured section of the flowline. The release occurred west of the Miller B #003 well pad and migrated across a closed and previously reclaimed 3-cell reserve pit and into the pasture west of the reserve pit. The release footprint encompassed an area of approximately 50 feet by 160 feet, as shown on Figure 3.

On February 22, 2017, Concho personnel were onsite to evaluate and sample the release area. One (1) backhoe trench (T-1) was installed in the release area west of the reclaimed reserve pit area to a total depth of 12 feet bgs. Additionally, four (4) horizontal trenches (North, South, East, and West) were installed outside the reported release footprint to total depths of 2 feet bgs. Selected samples were sent to Xenco Laboratories in Midland, Texas and analyzed for TPH EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. The trench locations are shown on Figure 3.

SUMMARY OF SAMPLING RESULTS AND 2018 WORK PLAN

Analytical results from the 2017 assessment activities are summarized in Table 1. All analytical results associated with the north, south, and east trenches were below the applicable Site RRALs. Analytical results associated with the west trench were above applicable Site reclamation requirements down to 2 feet below the ground surface. Analytical results associated with samples from the T-1 trench location were above applicable Site RRALs for chloride, BTEX, and TPH down to 3 feet below the ground surface.

Tetra Tech prepared a Work Plan dated June 15, 2018 on behalf of Concho for the Site based on the results of the 2017 assessment activities and submitted it to the NMOCD for approval. Based on the analytical results and the release footprint, which migrated across a closed and reclaimed 3-cell reserve pit, Concho proposed to remove the impacted soils in the area of trench (T-1) to an approximate depth of 4 feet below surface. Resampling at the area of the horizontal trench (West) was also proposed to confirm the chloride results detected at 2 feet below surface. If confirmation samples indicated a deeper chloride impact, excavation of this area was proposed to a depth of 3-4 feet below surface and a 20-mil liner was proposed as a cap to prevent vertical migration of the deeper impact.

In addition, excavation of any hydrocarbon impact on top of the closed reserve pit was proposed to address the surficial staining in the area. However, no further evaluation was performed on the closed reserve pit due to potential chloride impacts present in the closed pit. It was stated that the assessment (chlorides) of the pit would not be representative to the impact encountered in the pasture.

Email correspondence from NMOCD dated July 11, 2018 and correspondence from the BLM dated July 19, 2018 requested additional sampling at the site. In the same email, BLM also identified an additional spill path to the north of the main spill path in the reclaimed reserve pit. Copies of the NMOCD and BLM email correspondence related to the June 15, 2018 Work Plan are presented in Appendix C.

VISUAL SITE INSPECTION

On behalf of ConocoPhillips, Tetra Tech conducted a visual inspection of the release Site on February 22, 2022. The purpose of the inspection was to document current Site conditions and evaluate vegetative growth in the pasture areas west of the pad. The Site is located in the Mescalero Sands region southeast of Maljamar, New Mexico, where the native landscape is composed of dune grasslands and mesquite scrub.

At the time of the inspection, the 3-cell reserve pit had been closed in accordance with 19.15.17.13(H)(3) NMAC. Tetra Tech personnel observed established vegetation in the reclaimed pit area that reflects a life-form ratio of plus or minus fifty percent of pre-disturbance levels, as indicated by the surrounding landscape. This vegetative stand appears sufficient to control erosion and non-native plant invasion and re-establish wildlife habitat or forage. However, indications of the former release flow path were observed during the visual inspection, most notably in the sandy low-lying area of sample location T-1. Based on the NMOCD and BLM correspondence, the northern extent of the flow path was identified within the reclaimed pit area, as indicated on Figure 3.

REMEDIATION WORK PLAN AND ALTERNATIVE CONFIRMATION SAMPLING PLAN

A revised Release Characterization and Remediation Work Plan (Work Plan) was prepared by Tetra Tech on behalf of ConocoPhillips and submitted to NMOCD on March 1, 2022, with fee application payment PO Number U6QRI-220301-C-1410. The Work Plan described the results of the visual inspection and the release assessment activities performed at the site. The Work Plan was approved via email by Mr. Bradford Billings on Monday, March 7, 2022 with the following comments:

- *Make sure off-pad to the West, not counting rip in Pit area, accommodates Section 13 mandates, as must the pad at P&A. 500 sq/ft for confirming samples is maximal approved. 120 days is allocated [for] completion of remedial efforts.*

Closure Report
August 17, 2022

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Mr. Billings also executed page 4 of the C-141 form included with the Work Plan. A 60-day extension request was approved by Mr. Billings via email on July 7, 2022, with a closure due date of September 3, 2022. A copy of the NMOCD correspondence is included in Appendix C.

REMEDIATION ACTIVITIES AND CONFIRMATION SAMPLING

From July 13-22, 2022, Tetra Tech personnel were onsite to supervise the remediation activities proposed in the approved Work Plan, including excavation, disposal, and confirmation sampling. Prior to confirmation sampling, on July 14, 2022, the NMOCD division district office was notified via email in accordance with Subsection D of 19.15.29.12 NMAC. Documentation of associated regulatory correspondence is included in Appendix C.

Impacted soils were excavated until a representative sample from the walls and bottom of the excavation had a field screening value inferred as lower than the RRALs for the Site. Once field screening was completed, confirmation floor and sidewall samples were collected for laboratory analysis to verify that the impacted materials were properly removed. Each confirmation sample laboratory analytical result was directly compared to the proposed reclamation requirements/RRALs to demonstrate compliance. Per the approved Alternative Confirmation Sampling Plan, confirmation samples were collected such that each discrete sample (sidewall and floor) were representative of no more than 500 square feet of excavated area. A total of five (5) floor sample locations and eighteen (18) sidewall sample locations were used during the remedial activities. Confirmation sidewall sample locations were categorized with the cardinal direction (N, E, S, W) followed by SW-#. Confirmation floor sample locations were labeled with "FS"-#. Excavated areas, depths and confirmation sample locations are indicated in Figure 4.

Initial confirmation soil sampling analytical results associated with locations FS-3 and WSW-3 exceeded the reclamation limit of 600 mg/kg for chlorides, and analytical results associated with FS-4 and FS-5 exceeded the reclamation limit of 100 mg/kg for TPH. After these areas were expanded 4 feet to the west and deepened by 1 foot, iterative confirmation samples were collected to encompass the original sample locations that triggered removal (nomenclature defined in Table 3) post-additional excavation.

Collected confirmation samples to be submitted for analysis were placed into laboratory-provided sample containers, transferred under chain-of-custody, and analyzed within appropriate holding times by Cardinal Laboratories in Hobbs, New Mexico. The soil samples were analyzed for TPH (GRO, DRO and ORO) by EPA Method 8015M, BTEX by EPA Method 8021B, and chlorides by SM4500Cl-B. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D.

Per the approved Work Plan and laboratory analytical results, the impacted areas were excavated to between 3 and 4 feet below pre-release grade. The portion of the release area in the closed reserve pit was scraped to 6 inches bgs per the approved work plan. All final confirmation soil samples (floor and sidewall) were below the respective RRALs and reclamation requirements for chloride, BTEX, and TPH. The results of the July 2022 confirmation sampling event are summarized in Table 3.

All the excavated material was transported offsite for proper disposal. Approximately 408 cubic yards of material were transported to the R360 Halfway facility in Hobbs, New Mexico for disposal. Once confirmation sampling activities were completed and associated analytical results were below the RRALs, the excavated areas were backfilled with clean material to surface grade. Photographs from the excavated areas prior to and immediately following placement of backfill are provided in Appendix E. Due to the number and large file size associated with the waste manifests, they are not included in this report; however, waste manifests can be uploaded to the portal separately upon NMOCD request.

As prescribed in the Work Plan, the backfilled areas were seeded in July 2022 to aid in revegetation. Based on soils at the site and the approved Work Plan, the New Mexico State Land Office (NMSLO) Sandy (S) Sites Seed Mixture was used for seeding and planted in the amount specified in the pounds pure live seed (PLS) per acre.

Closure Report
August 17, 2022

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

CONCLUSION

ConocoPhillips respectfully requests closure of the incident based on the confirmation sampling results and remediation activities performed. The final C-141 forms are enclosed in Appendix A. If you have any questions concerning the remediation activities for the Site, please call me at (512) 739-7874 or Christian at (512) 338-2661.

Sincerely,
Tetra Tech, Inc.



Samantha K. Abbott, P.G.
Project Manager



Christian M. Llull, P.G.
Program Manager

cc:
Mr. Ike Tavarez, RMR – ConocoPhillips

Closure Report
August 17, 2022

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LIST OF ATTACHMENTS

Figures:

- Figure 1 – Overview Map
- Figure 2 – Topographic Map
- Figure 3 – Release Extent Map
- Figure 4 – Remediation Extent and Confirmation Sampling Locations

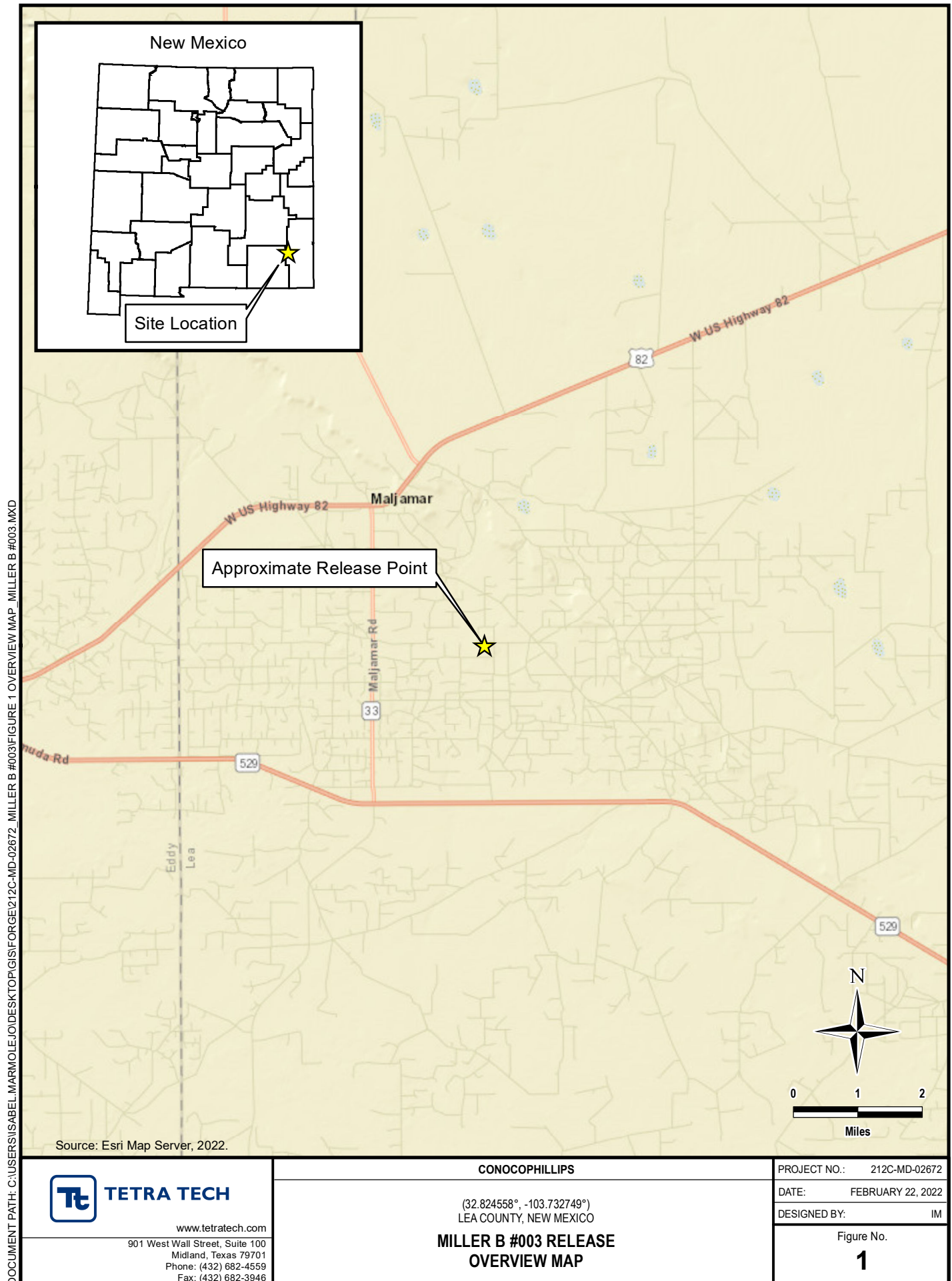
Tables:

- Table 1 – Summary of Analytical Results – Soil Assessment
- Table 2 – Summary of Analytical Results – Soil Remediation

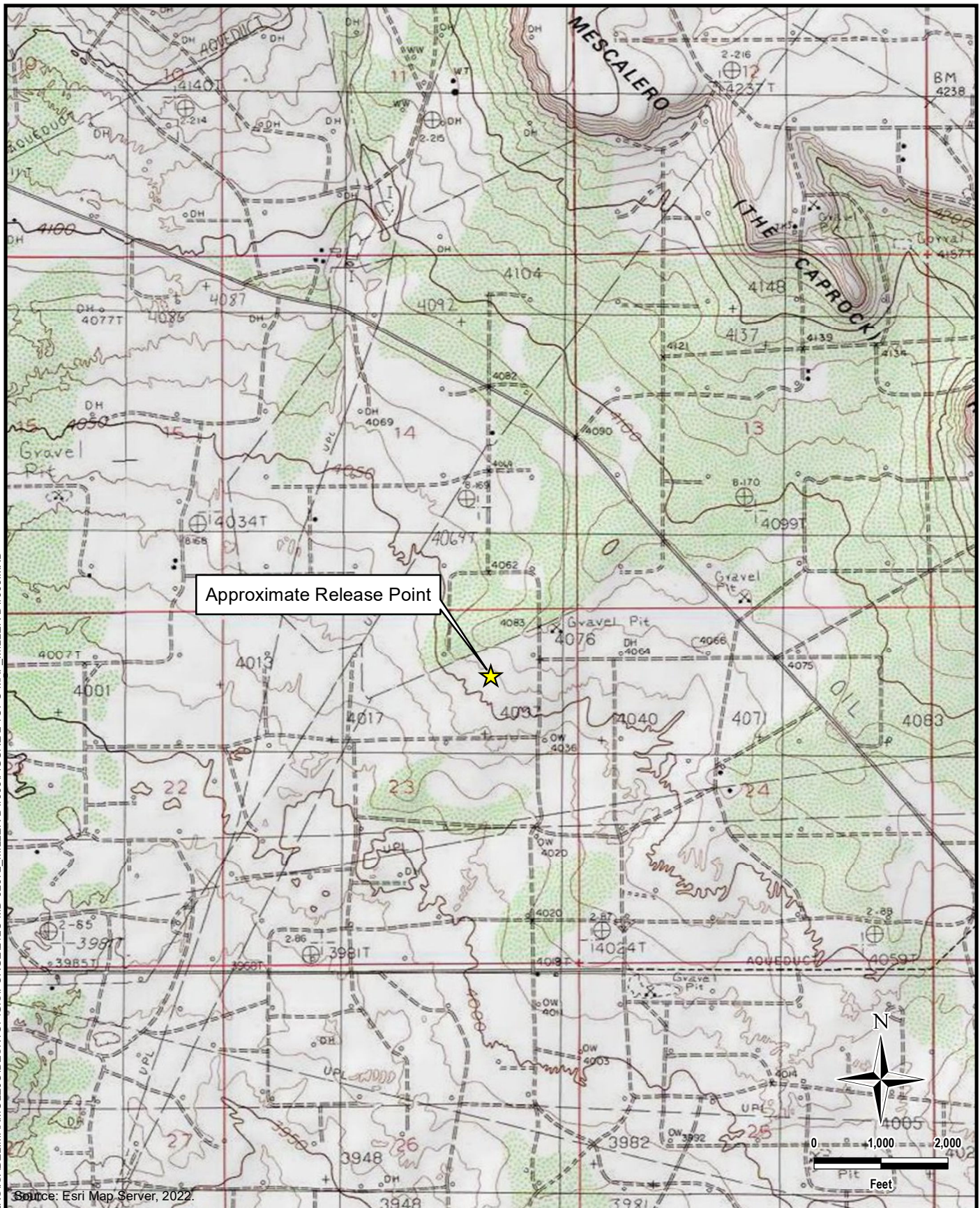
Appendices:

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

FIGURES



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CONOCOPHILLIPS

 (32.824558°, -103.732749°)
 LEA COUNTY, NEW MEXICO

**MILLER B #003 RELEASE
 TOPOGRAPHIC MAP**

PROJECT NO.: 212C-MD-02672

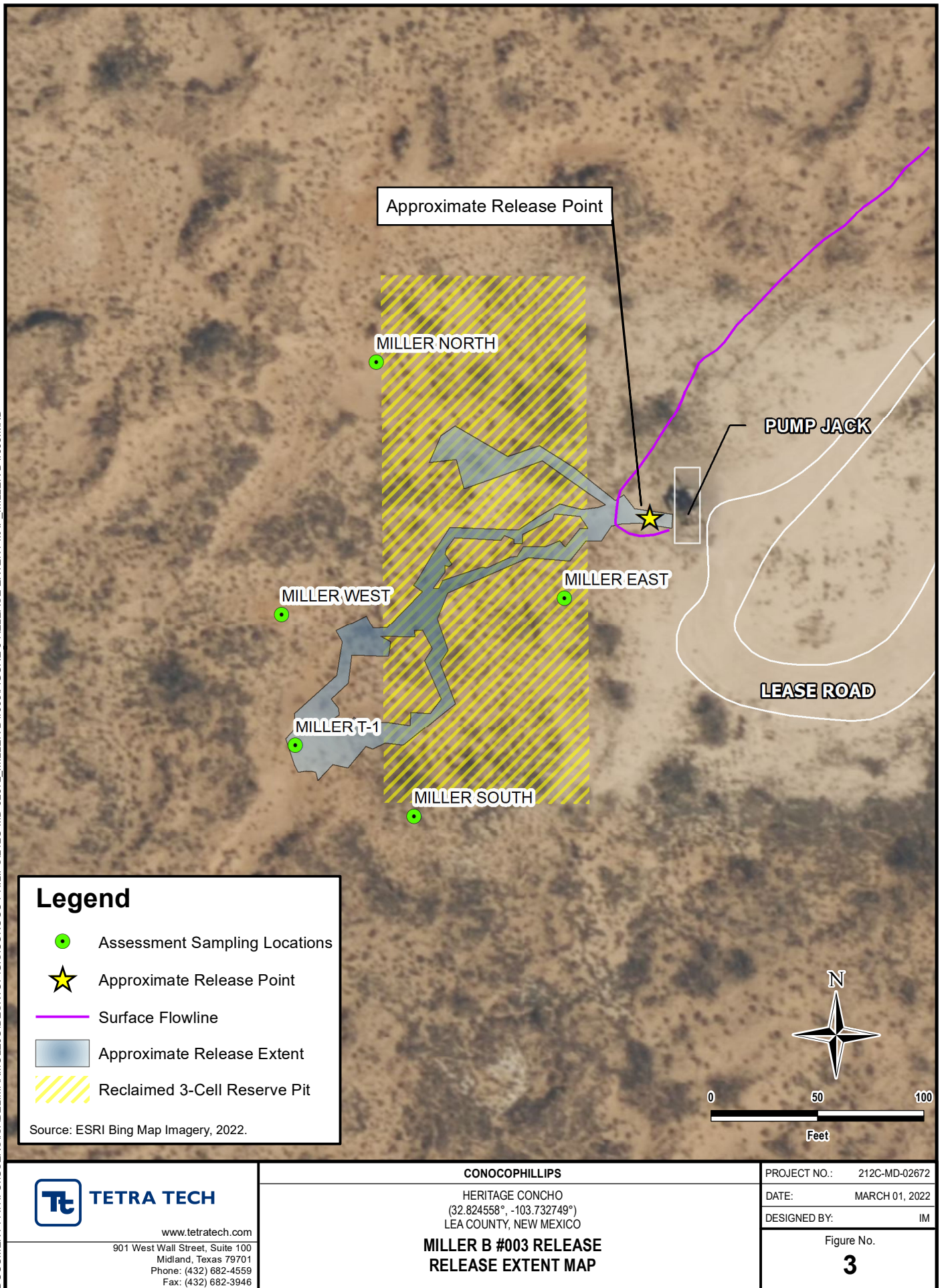
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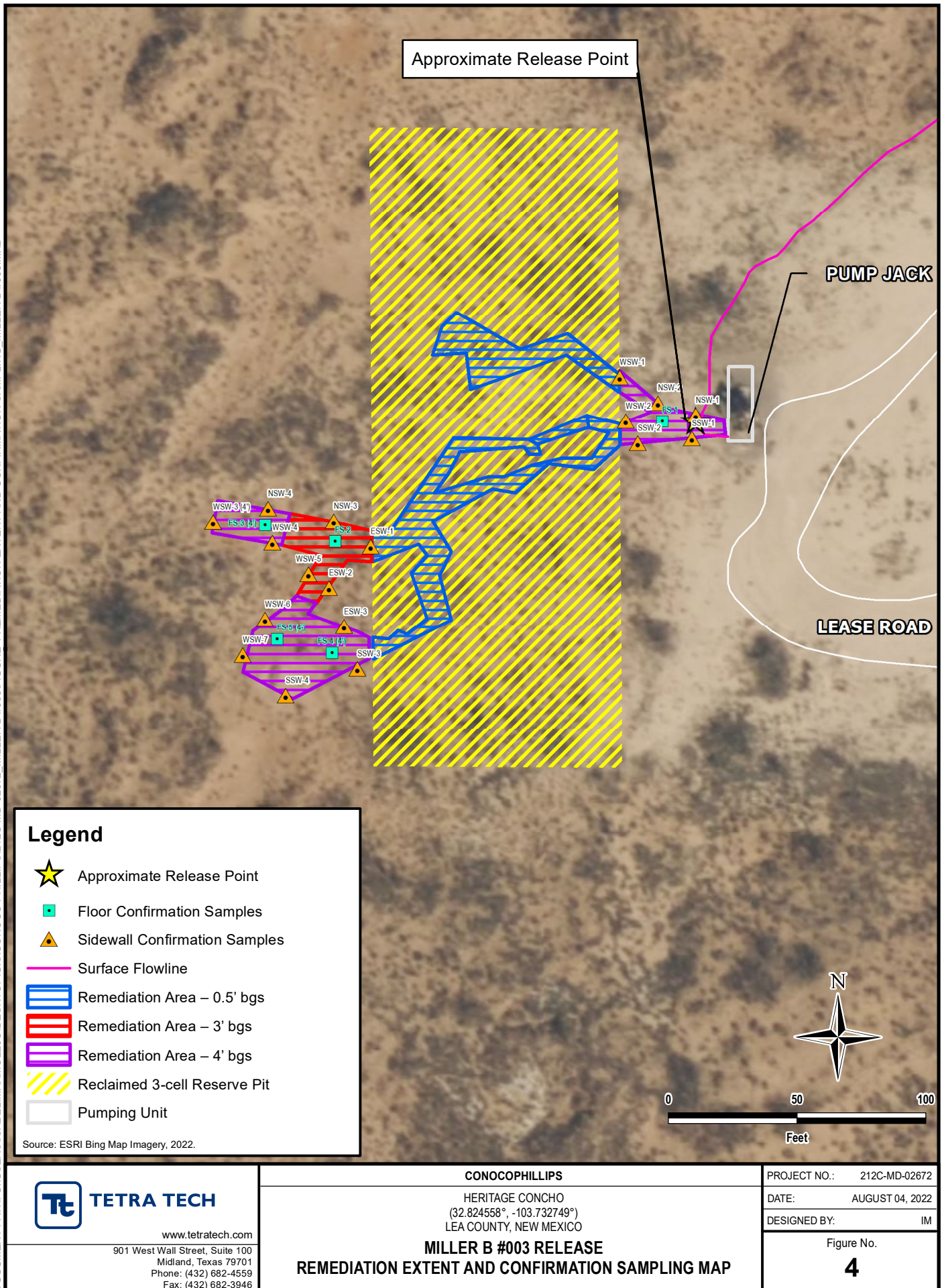
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DOCUMENT PATH: C:\USERS\ISABEL.MARMOLEJO\DESKTOP\GIS\CONOCO PHILIPS\212C-MD-02672 MILLER B #003\FIGURE 3 RELEASE EXTENT MAP_MILLER B #003.MXD



DOCUMENT PATH: C:\USERS\ISABEL MARMOLEJO\DESKTOP\GIS\CONOCO PHILLIPS\212C-MD-02672 MILLER B #003\FIGURE 4 REMEDIATION EXTENT AND CONFIRMATION SAMPLING_MILLER B #003.MXD



TABLE

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT - 1RP-4957/NOY1704058292
HERITAGE CONCHO
MILLER B FEDERAL #003 FLOWLINE RELEASE
LEA 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		MRO		Total TPH	
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q		
T-1	2/22/2017	SURFACE	505		28.9		168		105		115		49.7		165		467		7,880		23,800		2,270		34,000	
		1	6,480		26.9		190		123		149		56.1		205		545		2,280		3,650		405		6,340	
		2	4,380		20.9		137		89.6		104		46.8		151		398		5,370		8,230		815		14,400	
		3	3,740		28.8		163		120		135		66.1		201		513		5,800		10,900		1,080		17,800	
		4	245		< 0.00149		< 0.00198		0.00366		0.00660		0.00759		0.0142		0.0179		29.4		168		16.8		214	
		5	19.5		< 0.00150		< 0.00200		< 0.00200		< 0.00200		< 0.00299		< 0.00200		< 0.00150		< 15.0		< 15.0		< 15.0		< 15.0	
		6	114		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
		8	191		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
		10	15.8		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
		12	13.2		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
NORTH	2/22/2017	SURFACE	6.34		< 0.00151		< 0.00202		< 0.00202		< 0.00202		< 0.00302		< 0.00202		< 0.00151		< 15.0		< 15.0		< 15.0		< 15.0	
		1	< 4.92		< 0.00728		< 0.00971		< 0.00971		< 0.00971		< 0.0146		< 0.00971		< 0.00728		< 14.9		< 14.9		< 14.9		< 14.9	
		2	< 4.89		< 0.00148		< 0.00197		< 0.00197		< 0.00197		< 0.00295		< 0.00197		< 0.00148		< 15.0		< 15.0		< 15.0		< 15.0	
EAST	2/22/2017	SURFACE	654		< 0.00148		< 0.00198		< 0.00198		< 0.00198		< 0.00296		< 0.00198		< 0.00148		< 15.0		19.9		< 15.0		19.9	
		1	627		< 0.00152		< 0.00202		< 0.00202		< 0.00202		< 0.00303		< 0.00202		< 0.00152		< 15.0		18.0		< 15.0		18.0	
		2	446		< 0.00151		0.00223		< 0.00201		0.00262		< 0.00301		0.00262		0.00485		< 15.0		< 15.0		< 15.0		< 15.0	
SOUTH	2/22/2017	SURFACE	7.04		< 0.00150		< 0.00200		< 0.00200		< 0.00200		< 0.00301		< 0.00200		< 0.00150		< 15.0		< 15.0		< 15.0		< 15.0	
		1	< 4.96		< 0.00150		< 0.00200		< 0.00200		< 0.00200		< 0.00299		< 0.00200		< 0.00150		< 15.0		< 15.0		< 15.0		< 15.0	
		2	< 4.90		< 0.00149		< 0.00198		< 0.00198		< 0.00198		< 0.00298		< 0.00198		< 0.00149		< 15.0		< 15.0		< 15.0		< 15.0	
WEST	2/22/2017	SURFACE	6.94		0.00152		0.00330		< 0.00203		< 0.00203		< 0.00304		< 0.00203		0.00482		< 15.0		< 15.0		< 15.0		< 15.0	
		1	59.8		< 0.00149		< 0.00199		< 0.00199		< 0.00199		< 0.00299		< 0.00199		< 0.00149		< 15.0		< 15.0		< 15.0		< 15.0	
		2	1,310		0.00168		0.00423		0.00258		0.00316		< 0.00297		0.00316		0.0117		< 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

MRO Motor Oil range organics

N/A Sample not analyzed for constituent

1 EPA Method 300.0

2 EPA Method 8021B

3 Method SW8015 Mod

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

Shaded rows indicate intervals proposed for excavation.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
INITIAL SOIL ASSESSMENT - 1RP-4957/NOY1704058292
HERITAGE CONCHO
MILLER B FEDERAL #003 FLOWLINE RELEASE
LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth	Field Screening Results		Chloride ¹		BTEX ²										TPH ³							
							Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)	
			Chloride	PID													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	
FS-1	7/14/2022	4	-	-	320		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		76.6		18.8		95.4	
FS-2	7/14/2022	3	-	-	304		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
FS-3	7/14/2022	3	-	-	1,900		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
FS-3 (4')*	7/18/2022	4	-	-	1,680		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
FS-4	7/14/2022	3	-	-	64.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		92.7		30		123	
FS-4 (4')*	7/18/2022	4	-	-	16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		48.2		< 10.0		48.2	
FS-5	7/14/2022	3	-	-	128		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		411		191		602	
FS-5 (4')*	7/18/2022	4	-	-	544		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		78.3		35.7		114	
NSW-1	7/14/2022	-	-	-	224		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
NSW-2	7/14/2022	-	-	-	512		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
NSW-3	7/14/2022	-	-	-	144		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
NSW-4	7/14/2022	-	-	-	128		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
ESW-1	7/14/2022	-	-	-	128		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
ESW-2	7/14/2022	-	-	-	64.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
ESW-3	7/14/2022	-	-	-	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
SSW-1	7/14/2022	-	-	-	80.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
SSW-2	7/14/2022	-	-	-	128		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
SSW-3	7/14/2022	-	-	-	32.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
SSW-4	7/14/2022	-	-	-	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
WSW-1	7/14/2022	-	-	-	64.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
WSW-2	7/14/2022	-	-	-	352		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
WSW-3	7/14/2022	-	-	-	1,250		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
WSW-3 (4')*	7/18/2022	-	-	-	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
WSW-4	7/14/2022	-	-	-	496		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
WSW-5	7/14/2022	-	-	-	192		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
WSW-6	7/14/2022	-	-	-	< 16.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	
WSW-7	7/14/2022	-	-	-	64.0		< 0.050		< 0.050		< 0.050		< 0.150		< 0.300		< 10.0		< 10.0		< 10.0		< 30.0	

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 Remediation RRALs and 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, with further excavation in each area indicated in ().

QUALIFIERS:

APPENDIX A C-141 Forms

Page 16 of 82
Received by OCD: 8/17/2022 10:22:34 AM
Released to Imaging: 10/19/2022 1:25:47 PM

District I
625 N. French Dr., Hobbs, NM 88240
District II
11 S. First St., Artesia, NM 88210
District III
000 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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company:	COG Operating LLC	Contact:	Robert McNeill
Address:	600 West Illinois Avenue, Midland TX 79701	Telephone No.	432-683-7443
Facility Name:	Miller B #003	Facility Type:	Flowline

Surface Owner:	Federal	Mineral Owner:		API No.	30-025-31054
----------------	---------	----------------	--	---------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	23	17S	32E	990	North	1295	East	Lea

Latitude 32.8245583 Longitude -103.7327499

NATURE OF RELEASE

Type of Release:	Oil and Produced Water	Volume of Release:	7 bbls Oil & 3 bbls PW	Volume Recovered:	6 bbls Oil & 1 bbls PW
Source of Release:	Poly Flowline	Date and Hour of Occurrence:	February 1, 2017 4:00 pm	Date and Hour of Discovery:	February 1, 2017 4:00 pm
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour:			
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.*

Flowline rupture due to paraffin buildup. The section of flowline was replaced

Describe Area Affected and Cleanup Action Taken.*

The release was within a 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>Rebecca Haskell</i>	OIL CONSERVATION DIVISION	
Printed Name: Rebecca Haskell	Approved by Environmental Specialist:	
Title: Senior HSE Coordinator	Approval Date: 2/9/2017	Expiration Date:
E-mail Address: rhaskell@concho.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: February 2, 2017 Phone: 432-683-7443		

Attach Additional Sheets If Necessary

1RP-4597 nOY1704058292 pOY1704058468

RECEIVED

By Olivia Yu at 4:09 pm, Feb 09, 2017

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 2/2/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1R-4597 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 1 office in Hobbs on or before 3/9/2017. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input 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 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 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 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 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 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 type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input 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	
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: _____ Title: _____

Signature:  _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan


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

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

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

OCD Only

Received by: _____ Date: _____

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

Signature: Bradford Billings Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature:  _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

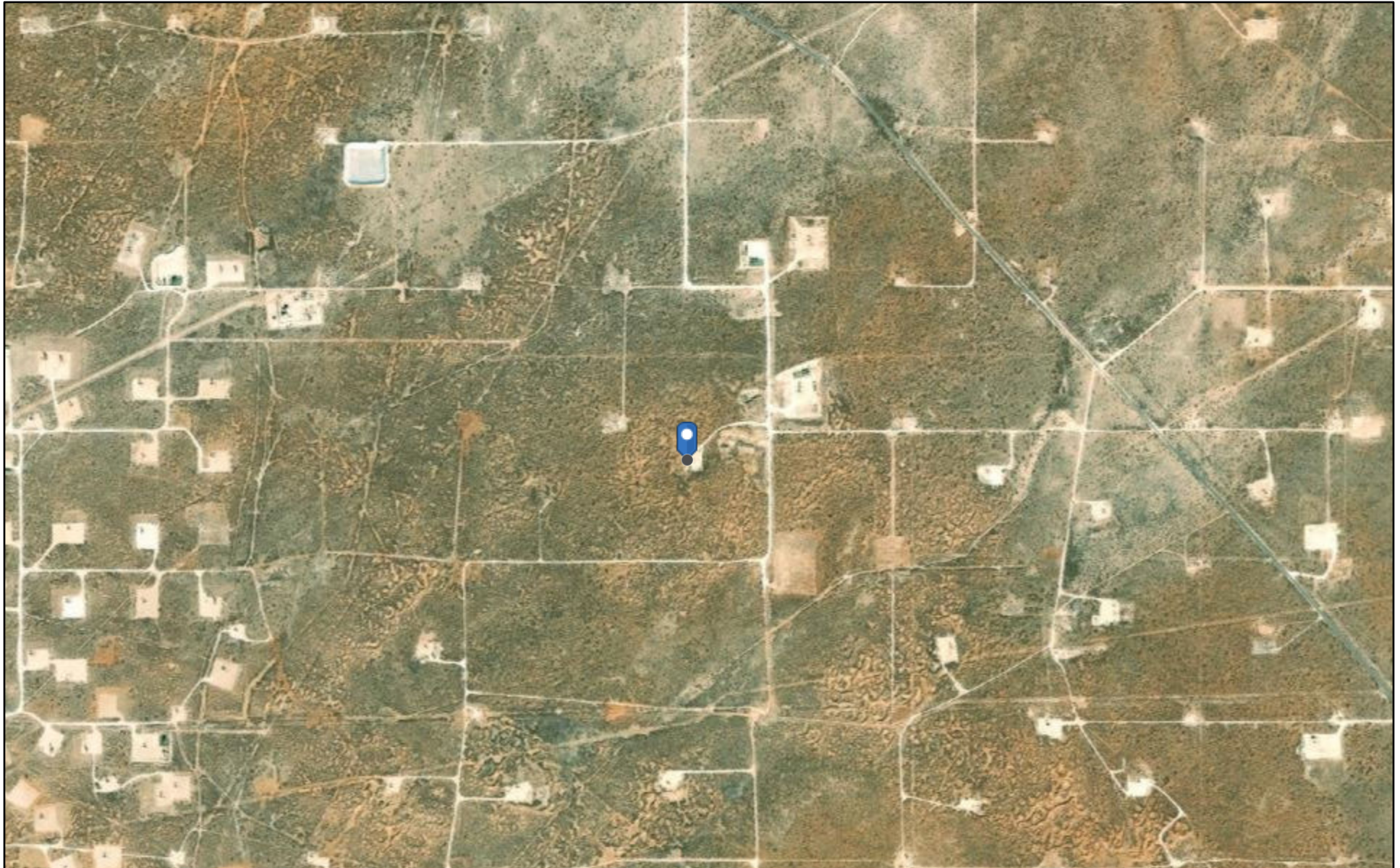
Closure Approved by: Ashley Maxwell _____ Date: _____

Printed Name: _____ Title: _____

APPENDIX B

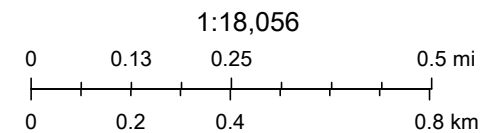
Site Characterization Data

OCD Water Bodies



1/20/2022, 4:04:38 PM

- ★ OCD District Offices
- PLJV Probable Playas
- OSE Water-bodies
- OSE Streams



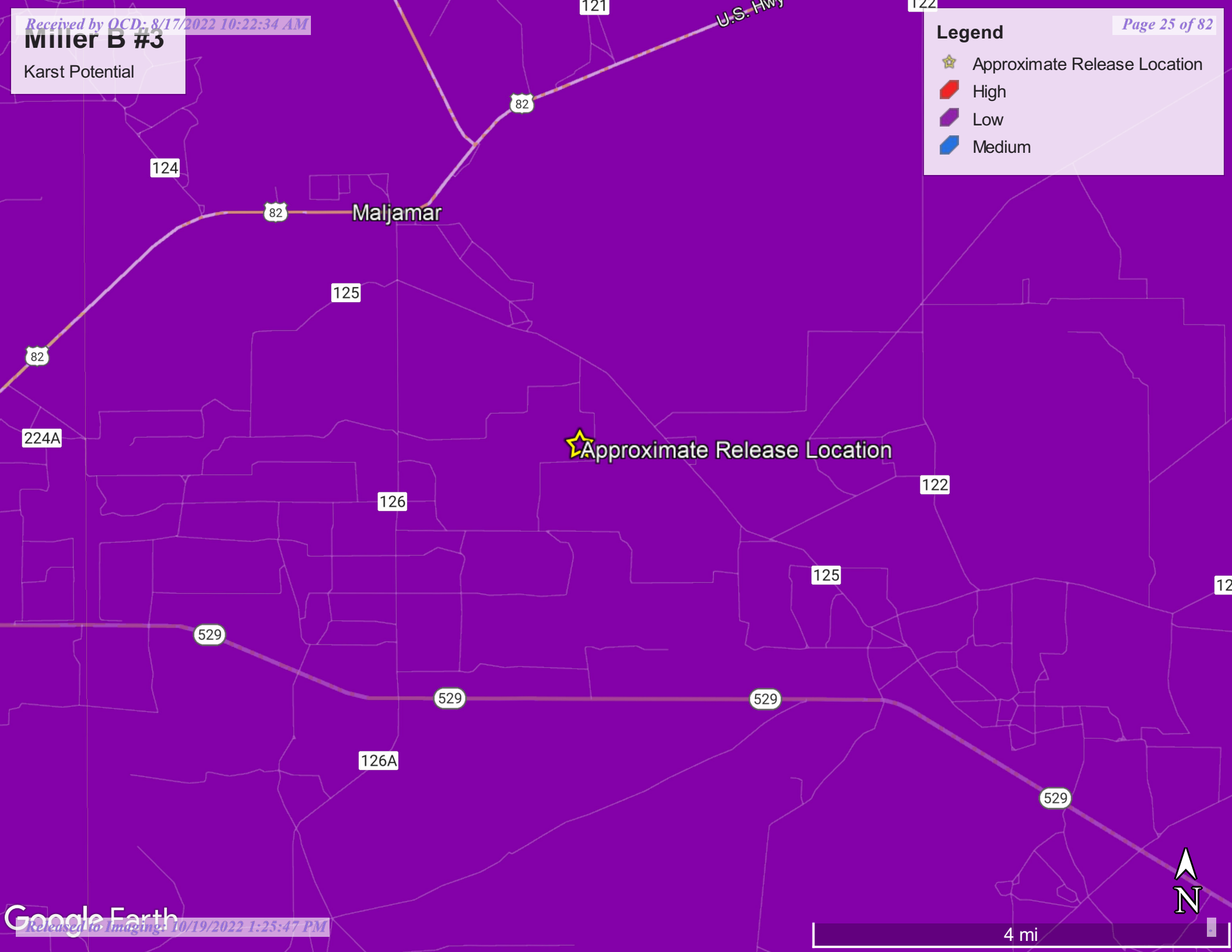
OCD, Maxar

Miller B #3

Karst Potential

Legend

- ☆ Approximate Release Location
- High
- Low
- Medium





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
RA 11911 POD1		RA	LE	1	3	1	24	17S	32E	619192	3632296	625	35		
RA 11684 POD5		RA	LE	3	1	4	11	17S	32E	618353	3635047	2512	275		
RA 11957 POD1		RA	LE	3	4	1	19	17S	33E	621177	3632200	2581	55		
RA 11684 POD1		RA	LE	1	1	4	11	17S	32E	618216	3635124	2606	275		
RA 11936 POD1		RA	LE	1	4	1	19	17S	33E	621246	3632321	2636	92		
RA 11937 POD1		RA	LE	1	4	1	19	17S	33E	621244	3632281	2638	95		
L 12974 POD1		L	LE	3	4	3	18	17S	33E	621233	3632940	2642	140	130	10
RA 11684 POD2		RA	LE	1	1	4	11	17S	32E	618313	3635248	2716	275		
L 13047 POD1		L	LE				11	17S	32E	618187	3635254*	2739	140		
RA 11684 POD3		RA	LE	3	3	1	11	17S	32E	618262	3635371	2844	275		
L 02770 S2		L	LE	2	2	3	18	17S	33E	621338	3633583*	2908	214	184	30
L 02770 S3		L	LE	2	2	3	18	17S	33E	621338	3633583*	2908	220	202	18
RA 11684 POD4		RA	LE	1	3	2	11	17S	32E	618334	3635521	2985	275		

Average Depth to Water: **172 feet**

Minimum Depth: **130 feet**

Maximum Depth: **202 feet**

Record Count: 13

UTMNAD83 Radius Search (in meters):

Easting (X): 618619

Northing (Y): 3632549

Radius: 3000

*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.

1/20/22 3:10 PM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

212C-MD-02067		TETRA TECH										LOG OF BORING BH-4															Page 1 of 3		
Project Name: MCA 123 Injection Line Release																													
Borehole Location: GPS: 32.810847°, -103.743217°															Surface Elevation: 3973 ft														
Borehole Number: BH-4										Borehole Diameter (in.): 8					Date Started: 3/23/2020					Date Finished: 3/23/2020									
WATER LEVEL OBSERVATIONS While Drilling <input checked="" type="checkbox"/> DRY ft Upon Completion of Drilling <input checked="" type="checkbox"/> DRY ft Remarks:																													
MATERIAL DESCRIPTION															DEPTH (ft)		REMARKS												
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG																		
			ExStik	PID				LL	PI																				
5	X	X	208	1.6							X	-SM- SILTY SAND; Brown, dense, dry, with no odor, with no staining.																	
	X	X	361	1.7																									
	X	X	657	1.9																									
	X	X	2.0	2.1																									
	X	X	2.03	1.9																									
10	X	X	1.95	2							X	-SM- SILTY SAND; Tan, dense, dry, with no odor, with no staining.																	
	X	X	9.45	3.1																									
	X	X	3.75	3.2																									
	X	X	2.81	1.4																									
	X	X																											
15	X	X									X	-SM- SILTY SAND; Light brown, dense, dry, with no odor, with no staining.																	
	X	X																											
	X	X																											
	X	X																											
	X	X																											
20	X	X									X	-SM- SILTY SAND; Light brown, dense, dry, with no odor, with no staining.																	
	X	X																											
	X	X																											
	X	X																											
	X	X																											
25	X	X									X	-SM- SILTY SAND; Light brown, dense, dry, with no odor, with no staining.																	
	X	X																											
	X	X																											
	X	X																											
	X	X																											

Sampler Types: <input checked="" type="checkbox"/> Split Spoon <input type="checkbox"/> Acetate Liner <input type="checkbox"/> Shelby <input type="checkbox"/> Vane Shear <input type="checkbox"/> Bulk Sample <input type="checkbox"/> California <input type="checkbox"/> Grab Sample <input type="checkbox"/> Test Pit															Operation Types: <input type="checkbox"/> Hand Auger <input type="checkbox"/> Mud Rotary <input type="checkbox"/> Air Rotary <input type="checkbox"/> Continuous Flight Auger <input type="checkbox"/> Direct Push <input type="checkbox"/> Wash Rotary <input type="checkbox"/> Core Barrel															Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.									
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Logger: Devin Dominguez															Drilling Equipment: Air Rotary															Driller: Scarborough Drilling									
--------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---------------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--------------------------------------	--	--	--	--	--	--	--	--	--

212C-MD-02067		TETRA TECH		LOG OF BORING BH-4				Page 2 of 3	
Project Name: MCA 123 Injection Line Release									
Borehole Location: GPS: 32.810847°, -103.743217°						Surface Elevation: 3973 ft			
Borehole Number: BH-4				Borehole Diameter (in.): 8		Date Started: 3/23/2020		Date Finished: 3/23/2020	

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS		DEPTH (ft)	REMARKS
												While Drilling	Upon Completion of Drilling		
												While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:			
			ExStik	PID				LL	PI			MATERIAL DESCRIPTION			
30			1.87	1.7										29	BH-4 (29'-30')
35															BH-4 (34'-35')
40			1.67	1.8										39	BH-4 (39'-40')
45															
50			587	1.7											BH-4 (49'-50')

Sampler Types: <input checked="" type="checkbox"/> Split Spoon <input type="checkbox"/> Shelby <input type="checkbox"/> Bulk Sample <input type="checkbox"/> Grab Sample	<input type="checkbox"/> Acetate Liner <input type="checkbox"/> Vane Shear <input checked="" type="checkbox"/> California <input type="checkbox"/> Test Pit	Operation Types: <input type="checkbox"/> Mud Rotary <input type="checkbox"/> Continuous Flight Auger <input type="checkbox"/> Wash Rotary	<input type="checkbox"/> Hand Auger <input type="checkbox"/> Air Rotary <input type="checkbox"/> Direct Push <input type="checkbox"/> Core Barrel	Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.
---	--	--	--	--

Logger: Devin Dominguez	Drilling Equipment: Air Rotary	Driller: Scarborough Drilling
--------------------------------	---------------------------------------	--------------------------------------

212C-MD-02067		TETRA TECH		LOG OF BORING BH-4				Page 3 of 3											
Project Name: MCA 123 Injection Line Release																			
Borehole Location: GPS: 32.810847°, -103.743217°						Surface Elevation: 3973 ft													
Borehole Number: BH-4					Borehole Diameter (in.): 8		Date Started: 3/23/2020		Date Finished: 3/23/2020										
DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm)	VOC FIELD SCREENING (ppm)	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT	PLASTICITY INDEX	MINUS NO. 200 (%)	GRAPHIC LOG	WATER LEVEL OBSERVATIONS While Drilling <u>▽</u> DRY ft Upon Completion of Drilling <u>▽</u> DRY ft Remarks:							
			ExStik	PID					LL			PI	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS				
55																			
60			491	1.4											60	BH-4 (59'-60')			
Bottom of borehole at 60.0 feet.																			
Sampler Types: Split Spoon Shelby Bulk Sample Grab Sample			Acetate Liner Vane Shear California Test Pit			Operation Types: Mud Rotary Continuous Flight Auger Wash Rotary			Hand Auger Air Rotary Direct Push Core Barrel			Notes: Analytical samples are shown in the "Remarks" column. Surface elevation is an estimated value.							
Logger: Devin Dominguez					Drilling Equipment: Air Rotary					Driller: Scarborough Drilling									

APPENDIX C

Regulatory Correspondence

From: Price, Henryetta
To: [Yu, Olivia, EMNRD](#)
Cc: [Gonzales, Clair](#); [Hernandez, Christina, EMNRD](#); [Tucker, Shelly](#); [Rebecca Haskell](#); [Dakota Neel](#); [Sheldon Hitchcock](#); [DeAnn Grant](#); [Tavarez, Ike](#)
Subject: Re: [EXTERNAL] RE: COG - Miller B#3 Work Plan Approval Request (1RP-4597)
Date: Thursday, July 19, 2018 4:13:04 PM

Good Afternoon,

After visiting the above site today, it is found that the spill path across the pit area will need to be characterized for impact. My suggestions is to do this carefully as we do not want to get into any pit material. There is vegetation present on the pit area which is good news, but vegetation might have been impacted in the immediate area due to possible runoff.

In the work plan, figure 3 shows the path of the spill, whereas aerial photos show a part of the spill that went NW and pooled in a low lying area. I am assuming that area was sampled as well since there is a pad of caliche where the fluids pooled. There is a patch of caliche at sample point T-1 and another mound of caliche where the possible pit area is identified and also coincides with the second path that was not mentioned in the work plan.

Please revise the work plan to include the path north of the main flow path, characterization of the impact over the pit, and background samples will be pulled at least 100 ft. from the impact area.

Please do not hesitate to contact me with any questions or issues.

Henryetta Price

Environmental Protection Specialist
Bureau Of Land Management
[Hprice@blm.gov](mailto:hprice@blm.gov)
Phone 575-234-5951
Cell 575-706-2780
Fax 575-234-5927

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

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On Wed, Jul 11, 2018 at 7:05 PM, Price, Henryetta <hprice@blm.gov> wrote:

Good Evening,

I do not think that delineating the pit area will do any good. I do not think there will be any

significant impact than what is identified on either side of the pit. BLM reclamation objectives may be impacted if we begin to disturb the pit. BLM however, will request that at least the top 2-3 ft. of impacted material is removed (root zone) and the bottom of the pit is capped with an impermeable liner or material to prevent any pit contaminants from significantly impacting reclamation. The excavation will extend 2 ft. past the impact area on the pit.

I would also like to conduct a visual inspection of the excavated area prior to backfill.

Henryetta Price

Environmental Protection Specialist
Bureau Of Land Management

Hprice@blm.gov

Phone 575-234-5951

Cell 575-706-2780

Fax 575-234-5927

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

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On Wed, Jul 11, 2018 at 2:12 PM, Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us> wrote:

Ms. Gonzales:

The portion of the release area for 1RP-4597 that flowed over a reserve pit will need to be characterized/delineated as well.

Thanks,

Olivia

From: Gonzales, Clair <Clair.Gonzales@tetrattech.com>

Sent: Friday, June 15, 2018 9:54 AM

To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; Hernandez, Christina, EMNRD <Christina.Hernandez@state.nm.us>

Cc: Tucker, Shelly <stucker@blm.gov>; hprice@blm.gov; Rebecca Haskell <RHaskell@concho.com>; Dakota Neel <DNeel2@concho.com>; Sheldon Hitchcock <SLHitchcock@concho.com>; DeAnn Grant <agrants@concho.com>; Tavarez, Ike <Ike.Tavarez@tetrattech.com>
Subject: COG - Miller B#3 Work Plan Approval Request (1RP-4597)

Good Morning,

Attached is the work plan for the above referenced site located in Lea County, New Mexico. Once approved COG will implement the work plan.

Thank you,

Clair Gonzales

Clair Gonzales | Project Manager

Phone: 432.687.8123 | Mobile 432.260.8634 | Fax:432.682.3946

clair.gonzales@tetrattech.com

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From: OCDOnline@state.nm.us
To: [Lull, Christian](#)
Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 85321
Date: Monday, March 7, 2022 2:32:56 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 approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nOY1704058292, with the following conditions:

- **Make sure off-pad to the West, not counting rip in Pit area, accommodates Section 13 mandates, as must the pad at P&A. 500 sq/ft for confirming samples is maximal approved. 120 days is allocated for completion of remedial efforts.**

The signed C-141 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,
Bradford Billings
Hydrologist/E.Spec.A
505-670-6549
bradford.billings@state.nm.us

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

From: [Billings, Bradford, EMNRD](#)
To: [Abbott, Sam](#)
Subject: RE: [EXTERNAL] Extension Request - nOY1704058292 (Miller B Federal #003)
Date: Thursday, July 7, 2022 9:18:47 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

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Hello,

Extension request for nOY1704058292 is APROVED until 9/3/2022. Please copy this communication in allied report(s).

Thank you.

Bradford Billings
EMNRD/OCD

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Wednesday, July 6, 2022 1:09 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>; Velez, Nelson, EMNRD <Nelson.Velez@state.nm.us>
Subject: Fw: [EXTERNAL] Extension Request - nOY1704058292 (Miller B Federal #003)

From: Abbott, Sam <Sam.Abbott@tetrattech.com>
Sent: Wednesday, July 6, 2022 12:13 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Cc: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Tavarez, Ike <Ike.Tavarez@conocophillips.com>; Llull, Christian <Christian.Llull@tetrattech.com>; Poole, Nicholas <NICHOLAS.POOLE@tetrattech.com>
Subject: [EXTERNAL] Extension Request - nOY1704058292 (Miller B Federal #003)

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Mr. Billings:

On behalf of ConocoPhillips, Tetra Tech is requesting a 60-day extension (until September 3, 2022) to complete the remediation and associated closure reporting for the Miller B Federal #003 Flowline Release site (**nOY1704058292**). Coordinating access agreements with the new leaseholder has led to

slight delays, but agreements are now in place and the proposed remediation work is scheduled to begin in the next two weeks. Notice of final confirmation sampling will be sent at that time.

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

Sam

Samantha Abbott, PG | Project Manager

Direct Mobile +1 (512) 739-7874 | Business +1 (512) 338-1667 | Sam.Abbott@tetrattech.com

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From: [Abbott, Sam](#)
To: ocd.enviro@state.nm.us
Cc: [Llull, Christian](#); [Tavarez, Ike](#); [Poole, Nicholas](#)
Subject: RE: Remediation Confirmation Sampling Notification - nOY1704058292
Date: Thursday, July 14, 2022 11:42:00 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

CORRECTION:

Remedial activities began at this site on July 14, 2022. Final confirmation sampling will be conducted on July 18, 2022. I apologize for the error in the original notification.

Thank you,
Sam

Samantha Abbott, PG | Project Manager
Direct Mobile +1 (512) 739-7874 | Business +1 (512) 338-1667 | Sam.Abbott@tetrattech.com

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From: Abbott, Sam
Sent: Thursday, July 14, 2022 11:29 AM
To: ocd.enviro@state.nm.us
Cc: [Llull, Christian <Christian.Llull@tetrattech.com>](mailto:Christian.Llull@tetrattech.com); [Tavarez, Ike <Ike.Tavarez@conocophillips.com>](mailto:Ike.Tavarez@conocophillips.com); [Poole, Nicholas <NICHOLAS.POOLE@tetrattech.com>](mailto:NICHOLAS.POOLE@tetrattech.com)
Subject: Remediation Confirmation Sampling Notification - nOY1704058292

Re: Incident ID (n#) **nOY1704058292**

To whom it may concern (c/o Bradford Billings, NMOCD),

In accordance with Subsection D of 19.15.29.12 NMAC, the responsible party must verbally notify the appropriate division district office prior to conducting confirmation sampling. Thus, on behalf of ConocoPhillips for the above referenced incident, Tetra Tech is duly providing this communication which serves as notification that confirmation sampling will be conducted at this site from July 14 through July 18, 2022.

NOTE: If you have any questions regarding this sampling schedule, please contact me.

Thank you,
Sam

Samantha Abbott, PG | Project Manager

Direct Mobile +1 (512) 739-7874 | Business +1 (512) 338-1667 | Sam.Abbott@tetrattech.com

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TETRA TECH

APPENDIX D

Laboratory Analytical Results



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

July 15, 2022

SAM ABBOTT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MILLER B #3

Enclosed are the results of analyses for samples received by the laboratory on 07/14/22 13:45.

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

Received:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: ESW - 1 (H223060-01)

BTX 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	07/14/2022	ND	2.05	102	2.00	2.30	
Toluene*	<0.050	0.050	07/14/2022	ND	2.08	104	2.00	2.44	
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.11	106	2.00	2.67	
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.44	107	6.00	2.73	
Total BTX	<0.300	0.300	07/14/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	07/15/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 64.9 % 43-149

Surrogate: 1-Chlorooctadecane 70.4 % 42.5-161

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

Received:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: ESW - 2 (H223060-02)

BTX 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	07/14/2022	ND	2.05	102	2.00	2.30		
Toluene*	<0.050	0.050	07/14/2022	ND	2.08	104	2.00	2.44		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.11	106	2.00	2.67		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.44	107	6.00	2.73		
Total BTX	<0.300	0.300	07/14/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	07/15/2022	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 69.0 % 43-149

Surrogate: 1-Chlorooctadecane 73.6 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: ESW - 3 (H223060-03)

BTX 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	07/14/2022	ND	2.05	102	2.00	2.30		
Toluene*	<0.050	0.050	07/14/2022	ND	2.08	104	2.00	2.44		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.11	106	2.00	2.67		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.44	107	6.00	2.73		
Total BTX	<0.300	0.300	07/14/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	07/15/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 70.0 % 43-149

Surrogate: 1-Chlorooctadecane 75.3 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: SSW - 3 (H223060-04)

BTX 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	07/14/2022	ND	2.05	102	2.00	2.30		
Toluene*	<0.050	0.050	07/14/2022	ND	2.08	104	2.00	2.44		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.11	106	2.00	2.67		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.44	107	6.00	2.73		
Total BTX	<0.300	0.300	07/14/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	07/15/2022	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 72.2 % 43-149

Surrogate: 1-Chlorooctadecane 77.6 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: SSW - 4 (H223060-05)

BTX 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	07/14/2022	ND	2.05	102	2.00	2.30		
Toluene*	<0.050	0.050	07/14/2022	ND	2.08	104	2.00	2.44		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.11	106	2.00	2.67		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.44	107	6.00	2.73		
Total BTX	<0.300	0.300	07/14/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/15/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 63.1 % 43-149

Surrogate: 1-Chlorooctadecane 66.6 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: WSW - 6 (H223060-06)

BTX 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	07/14/2022	ND	2.05	102	2.00	2.30	
Toluene*	<0.050	0.050	07/14/2022	ND	2.08	104	2.00	2.44	
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.11	106	2.00	2.67	
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.44	107	6.00	2.73	
Total BTX	<0.300	0.300	07/14/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/15/2022	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/14/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 66.0 % 43-149

Surrogate: 1-Chlorooctadecane 68.4 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: WSW - 5 (H223060-07)

BTX 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	07/14/2022	ND	2.05	102	2.00	2.30	
Toluene*	<0.050	0.050	07/14/2022	ND	2.08	104	2.00	2.44	
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.11	106	2.00	2.67	
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.44	107	6.00	2.73	
Total BTX	<0.300	0.300	07/14/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	07/15/2022	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	07/14/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 59.5 % 43-149

Surrogate: 1-Chlorooctadecane 62.4 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: WSW - 7 (H223060-08)

BTX 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	07/14/2022	ND	2.05	102	2.00	2.30	
Toluene*	<0.050	0.050	07/14/2022	ND	2.08	104	2.00	2.44	
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.11	106	2.00	2.67	
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.44	107	6.00	2.73	
Total BTX	<0.300	0.300	07/14/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	07/15/2022	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	07/14/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 64.9 % 43-149

Surrogate: 1-Chlorooctadecane 64.1 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: WSW - 3 (H223060-09)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/14/2022	ND	2.05	102	2.00	2.30		
Toluene*	<0.050	0.050	07/14/2022	ND	2.08	104	2.00	2.44		
Ethylbenzene*	<0.050	0.050	07/14/2022	ND	2.11	106	2.00	2.67		
Total Xylenes*	<0.150	0.150	07/14/2022	ND	6.44	107	6.00	2.73		
Total BTEx	<0.300	0.300	07/14/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1250	16.0	07/15/2022	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	07/14/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 55.9 % 43-149

Surrogate: 1-Chlorooctadecane 56.5 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: NSW - 4 (H223060-10)

BTEx 8021B		mg/kg		Analyzed By: JH/						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 69.7 % 43-149

Surrogate: 1-Chlorooctadecane 73.5 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: NSW - 3 (H223060-11)

BTEx 8021B		mg/kg		Analyzed By: JH/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/15/2022	ND	2.13	107	2.00	3.41	
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26	
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39	
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50	
Total BTEx	<0.300	0.300	07/15/2022	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 66.2 % 43-149

Surrogate: 1-Chlorooctadecane 70.0 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: FS - 2 (H223060-12)

BTX 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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTX	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 61.3 % 43-149

Surrogate: 1-Chlorooctadecane 63.9 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: FS - 3 (H223060-13)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1900	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 57.6 % 43-149

Surrogate: 1-Chlorooctadecane 58.8 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: FS - 4 (H223060-14)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	92.7	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	30.0	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 64.0 % 43-149

Surrogate: 1-Chlorooctadecane 73.2 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: FS - 5 (H223060-15)

BTX 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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTX	<0.300	0.300	07/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	411	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	191	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 66.8 % 43-149

Surrogate: 1-Chlorooctadecane 96.4 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: FS - 1 (H223060-16)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEX	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	76.6	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	18.8	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 68.6 % 43-149

Surrogate: 1-Chlorooctadecane 79.7 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: NSW - 1 (H223060-17)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 74.4 % 43-149

Surrogate: 1-Chlorooctadecane 81.1 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: NSW - 2 (H223060-18)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	512	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 59.7 % 43-149

Surrogate: 1-Chlorooctadecane 64.3 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: WSW - 1 (H223060-19)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 78.4 % 43-149

Surrogate: 1-Chlorooctadecane 84.2 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: WSW - 2 (H223060-20)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	07/15/2022	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	07/15/2022	ND	157	78.5	200	13.7	
DRO >C10-C28*	<10.0	10.0	07/15/2022	ND	164	81.8	200	14.8	
EXT DRO >C28-C36	<10.0	10.0	07/15/2022	ND					

Surrogate: 1-Chlorooctane 74.6 % 43-149

Surrogate: 1-Chlorooctadecane 80.7 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: SSW - 2 (H223060-21)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	07/15/2022	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	07/14/2022	ND	192	96.0	200	11.4	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	219	109	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 91.1 % 43-149

Surrogate: 1-Chlorooctadecane 90.2 % 42.5-161

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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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: SSW - 1 (H223060-22)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	07/15/2022	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	07/14/2022	ND	192	96.0	200	11.4	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	219	109	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 93.0 % 43-149

Surrogate: 1-Chlorooctadecane 92.3 % 42.5-161

Cardinal Laboratories

*=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:	07/14/2022	Sampling Date:	07/14/2022
Reported:	07/15/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: WSW - 4 (H223060-23)

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	07/15/2022	ND	2.13	107	2.00	3.41		
Toluene*	<0.050	0.050	07/15/2022	ND	2.16	108	2.00	4.26		
Ethylbenzene*	<0.050	0.050	07/15/2022	ND	2.18	109	2.00	3.39		
Total Xylenes*	<0.150	0.150	07/15/2022	ND	6.64	111	6.00	3.50		
Total BTEx	<0.300	0.300	07/15/2022	ND						

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	07/15/2022	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	07/14/2022	ND	192	96.0	200	11.4	
DRO >C10-C28*	<10.0	10.0	07/14/2022	ND	219	109	200	2.11	
EXT DRO >C28-C36	<10.0	10.0	07/14/2022	ND					

Surrogate: 1-Chlorooctane 90.4 % 43-149

Surrogate: 1-Chlorooctadecane 87.7 % 42.5-161

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene", is written over a horizontal line.

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

[illegible]



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Concepcion		BILL TO		ANALYSIS REQUEST	
Project Manager: Sam Abbott		P.O. #:			
Address:		Company: Tetra Tech			
City:	State:	ZIP:	Attn: Sam Abbott		
Phone #:	Fax #:		Address: by email		
Project #: 20C-MD-02672		Project Owner:			
Project Name: Miler B #3		City:			
Project Location: Lee County, NM		State:			
Sample Name: Colton Bikeschaff		Phone #:			
FOR LAB USE ONLY		Fax #:			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX	PRESERV
				GROUNDWATER	
				WASTEWATER	
				SOIL	
				OIL	
				SLUDGE	
				OTHER :	
				ACID/BASE:	
				ICE / COOL	
				OTHER :	
				DATE	TIME
H223060					
11	MSW-3				
12	FS-2				
13	FS-3				
14	FS-4				
15	FS-5				
16	FS-1				
17	MSW-1				
18	MSW-2				
19	MSW-1				
20	MSW-2				

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Relinquished By:	Date: 7/14/12	Received By:	Date: 7/14/12
Relinquished By: Colton Bikeschaff	Time: 1345	Received By: Melissa Chabey	Time: 1345
Delivered By: (Circle One)	Observed Temp. °C: 31.5	Sample Condition:	CHECKED BY: (Initials) AD
Sampler - UPS - Bus - Other:	Corrected Temp. °C: 30.9	Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>	Thermometer ID #113
		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Correction Factor -0.5°C
			Standard <input type="checkbox"/> Rush <input checked="" type="checkbox"/>
			Bacteria (only) <input checked="" type="checkbox"/>
			Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/>
			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
			Observed Temp. °C
			Corrected Temp. °C
Turnaround Time:			
Verbal Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:			
All Results are emailed. Please provide Email address:			
REMARKS: Sam Abbott extra tech con			



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

3/3

BILL TO

ANALYSIS REQUEST

3/3

Company Name: Cardinal Labs
Project Manager: Sam Abbott

P.O. #:

Address:

Company: Tetra Tech

City: State: Zip:

Attn: Sam Abbott

Phone #: Fax #:

Address: by email

Project #: 212-MD-02672 Project Owner:

City: State: Zip:

Project Name: Miller E #13

State: Zip:

Project Location: Lee County, NM

Phone #:

Sampler Name: Colton Bixacre

Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

H233060

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

7/14/22

7/14/22

7/14/22

7/14/22

7/14/22

7/14/22

7/14/22

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Relinquished By:

Date: 7/14/22

Received By:

Verbal Result: ☐ Yes ☒ No

Add'l Phone #:

All Results are emailed. Please provide Email address:

Relinquished By:

Date: 7/14/22

Received By:

REMARKS:

Sam Abbott@tetra-tech.com

Time:

Date:

Time:

Delivered By: (Circle One)

Observed Temp. °C 31.5

Sample Condition

CHECKED BY: (Initials)

Turnaround Time:

Standard

☒ Rush

Bacteria (only)

Sample Condition

Sampler - UPS - Bus - Other:

Corrected Temp. °C 30.9

Cool ☐ Intact ☒

Thermometer ID #113

Correction Factor -0.3°C

24 hrs. TAT

☐ Cool ☐ Intact ☐

Observed Temp. °C

Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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



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

July 19, 2022

SAM ABBOTT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: MILLER B #3

Enclosed are the results of analyses for samples received by the laboratory on 07/18/22 16:35.

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

Cardinal Laboratories is 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:	07/18/2022	Sampling Date:	07/18/2022
Reported:	07/19/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: FS - 3 (4') (H223117-01)

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	07/19/2022	ND	2.06	103	2.00	11.2	
Toluene*	<0.050	0.050	07/19/2022	ND	2.15	107	2.00	12.2	
Ethylbenzene*	<0.050	0.050	07/19/2022	ND	2.17	108	2.00	11.9	
Total Xylenes*	<0.150	0.150	07/19/2022	ND	6.65	111	6.00	11.3	
Total BTEX	<0.300	0.300	07/19/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 69.9-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: GM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1680	16.0	07/19/2022	ND	432	108	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	07/19/2022	ND	192	95.8	200	0.251	
DRO >C10-C28*	<10.0	10.0	07/19/2022	ND	205	103	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	07/19/2022	ND					

Surrogate: 1-Chlorooctane 70.3 % 43-149

Surrogate: 1-Chlorooctadecane 78.8 % 42.5-161

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Celey D. Keene, Lab Director/Quality Manager



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 Fax To: (432) 682-3946

Received:	07/18/2022	Sampling Date:	07/18/2022
Reported:	07/19/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: FS - 4 (4') (H223117-02)

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	07/19/2022	ND	2.06	103	2.00	11.2	
Toluene*	<0.050	0.050	07/19/2022	ND	2.15	107	2.00	12.2	
Ethylbenzene*	<0.050	0.050	07/19/2022	ND	2.17	108	2.00	11.9	
Total Xylenes*	<0.150	0.150	07/19/2022	ND	6.65	111	6.00	11.3	
Total BTEx	<0.300	0.300	07/19/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 118 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	07/19/2022	ND	432	108	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	07/19/2022	ND	192	95.8	200	0.251	
DRO >C10-C28*	48.2	10.0	07/19/2022	ND	205	103	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	07/19/2022	ND					

Surrogate: 1-Chlorooctane 71.6 % 43-149

Surrogate: 1-Chlorooctadecane 80.3 % 42.5-161

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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:	07/18/2022	Sampling Date:	07/18/2022
Reported:	07/19/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: FS - 5 (4') (H223117-03)

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	07/19/2022	ND	2.06	103	2.00	11.2	
Toluene*	<0.050	0.050	07/19/2022	ND	2.15	107	2.00	12.2	
Ethylbenzene*	<0.050	0.050	07/19/2022	ND	2.17	108	2.00	11.9	
Total Xylenes*	<0.150	0.150	07/19/2022	ND	6.65	111	6.00	11.3	
Total BTEx	<0.300	0.300	07/19/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID) 119 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	544	16.0	07/19/2022	ND	432	108	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	07/19/2022	ND	192	95.8	200	0.251	
DRO >C10-C28*	78.3	10.0	07/19/2022	ND	205	103	200	0.171	
EXT DRO >C28-C36	35.7	10.0	07/19/2022	ND					

Surrogate: 1-Chlorooctane 66.4 % 43-149

Surrogate: 1-Chlorooctadecane 77.3 % 42.5-161

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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:	07/18/2022	Sampling Date:	07/18/2022
Reported:	07/19/2022	Sampling Type:	Soil
Project Name:	MILLER B #3	Sampling Condition:	** (See Notes)
Project Number:	212C-MD-02672	Sample Received By:	Tamara Oldaker
Project Location:	COP - LEA COUNTY, NM		

Sample ID: WSW - 3 (4') (H223117-04)

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	07/19/2022	ND	2.06	103	2.00	11.2		
Toluene*	<0.050	0.050	07/19/2022	ND	2.15	107	2.00	12.2		
Ethylbenzene*	<0.050	0.050	07/19/2022	ND	2.17	108	2.00	11.9		
Total Xylenes*	<0.150	0.150	07/19/2022	ND	6.65	111	6.00	11.3		
Total BTEx	<0.300	0.300	07/19/2022	ND						

Surrogate: 4-Bromofluorobenzene (PID) 118 % 69.9-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	07/19/2022	ND	432	108	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	07/19/2022	ND	192	95.8	200	0.251	
DRO >C10-C28*	<10.0	10.0	07/19/2022	ND	205	103	200	0.171	
EXT DRO >C28-C36	<10.0	10.0	07/19/2022	ND					

Surrogate: 1-Chlorooctane 64.5 % 43-149

Surrogate: 1-Chlorooctadecane 72.6 % 42.5-161

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

Celey D. Keene, Lab Director/Quality Manager

**BILL TO**

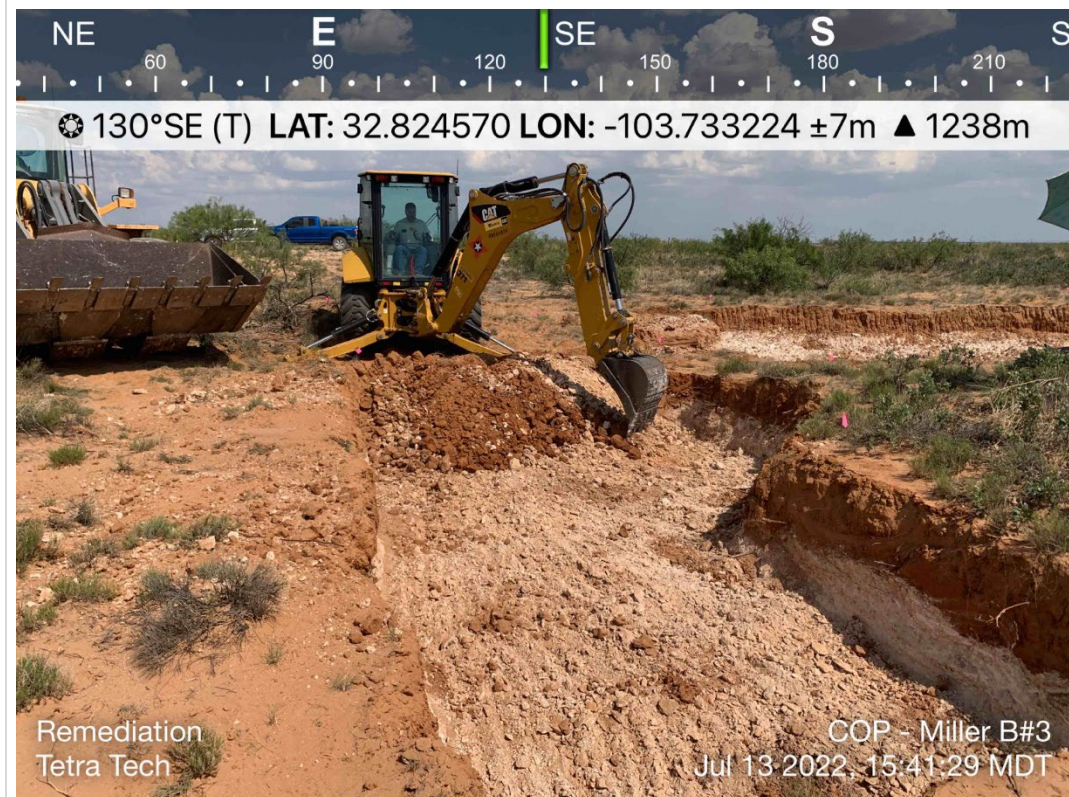
† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

APPENDIX E

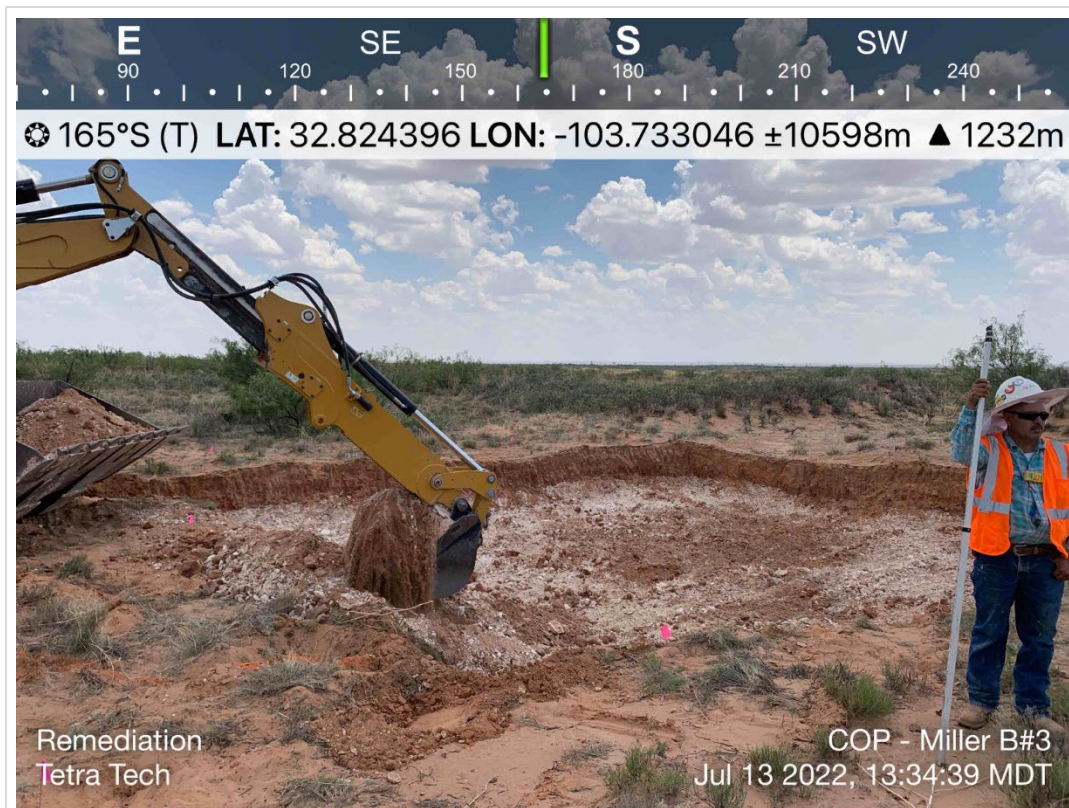
Photographic Documentation



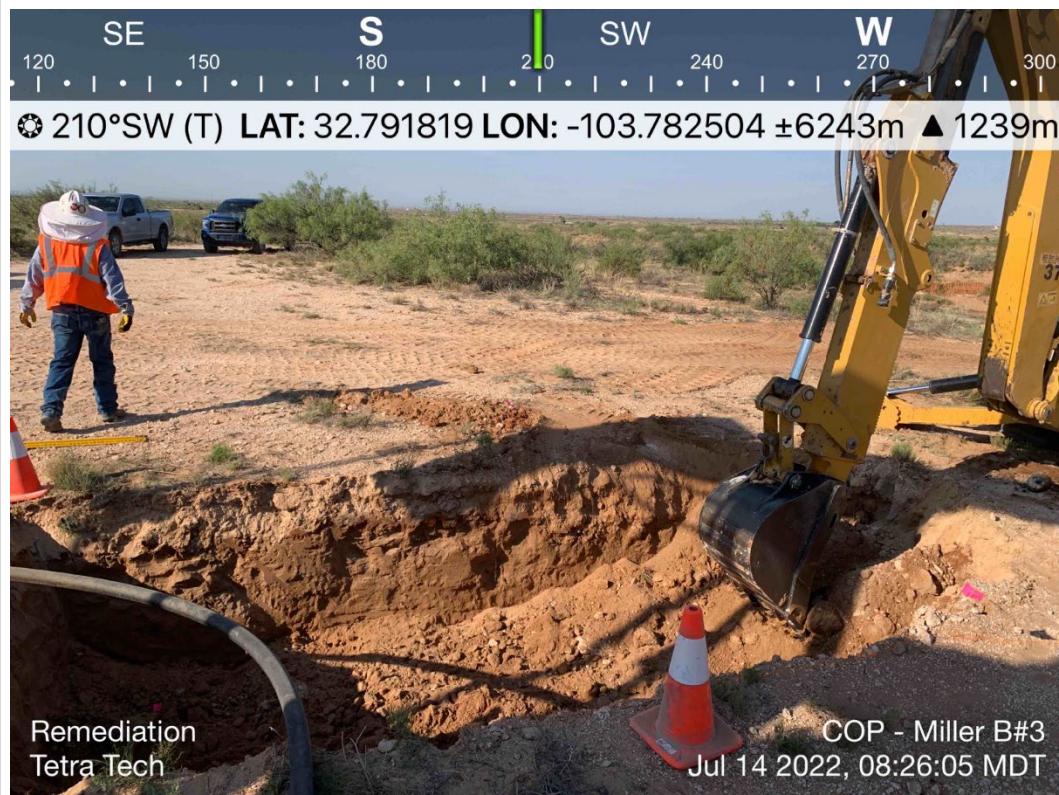
TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View west of Miller B Federal #003 signage.	1
	SITE NAME	Miller B Federal #003 Flowline Release	2/22/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View southeast of Miller B Federal #003 excavation.	2
	SITE NAME	Miller B Federal #003 Flowline Release	7/13/2022



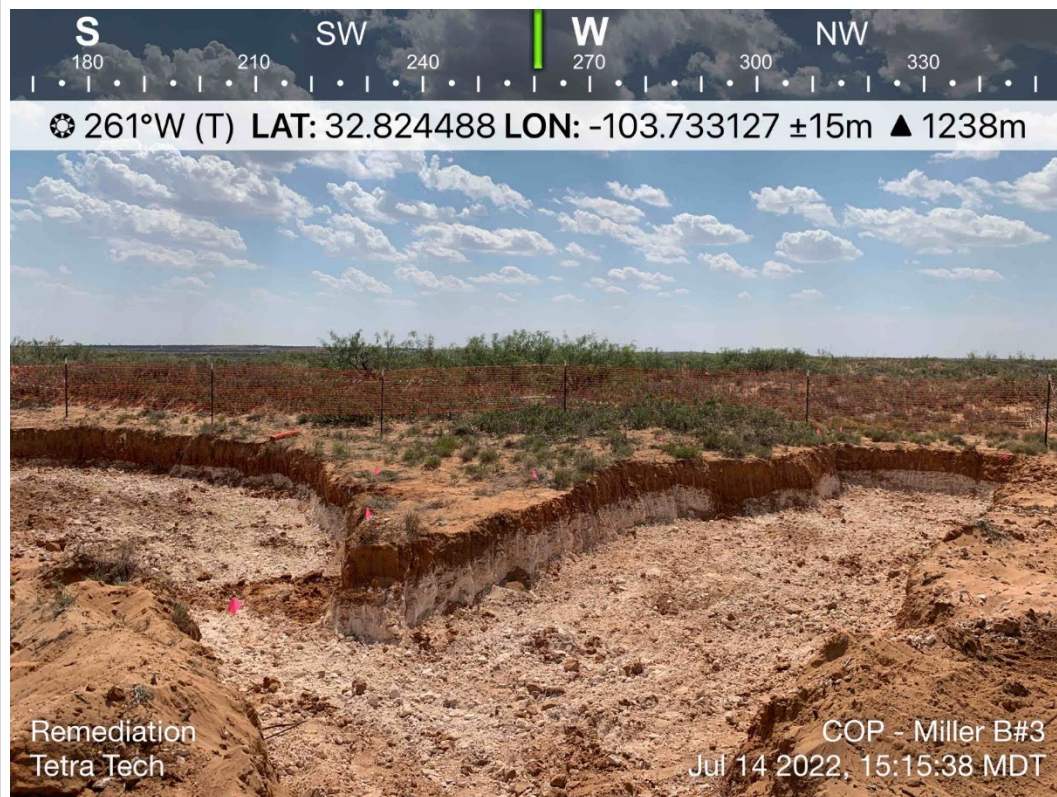
TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View south of Miller B Federal #003 excavation.	3
	SITE NAME	Miller B Federal #003 Flowline Release	7/13/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View south-southwest of Miller B Federal #003 excavation.	4
	SITE NAME	Miller B Federal #003 Flowline Release	7/14/2022



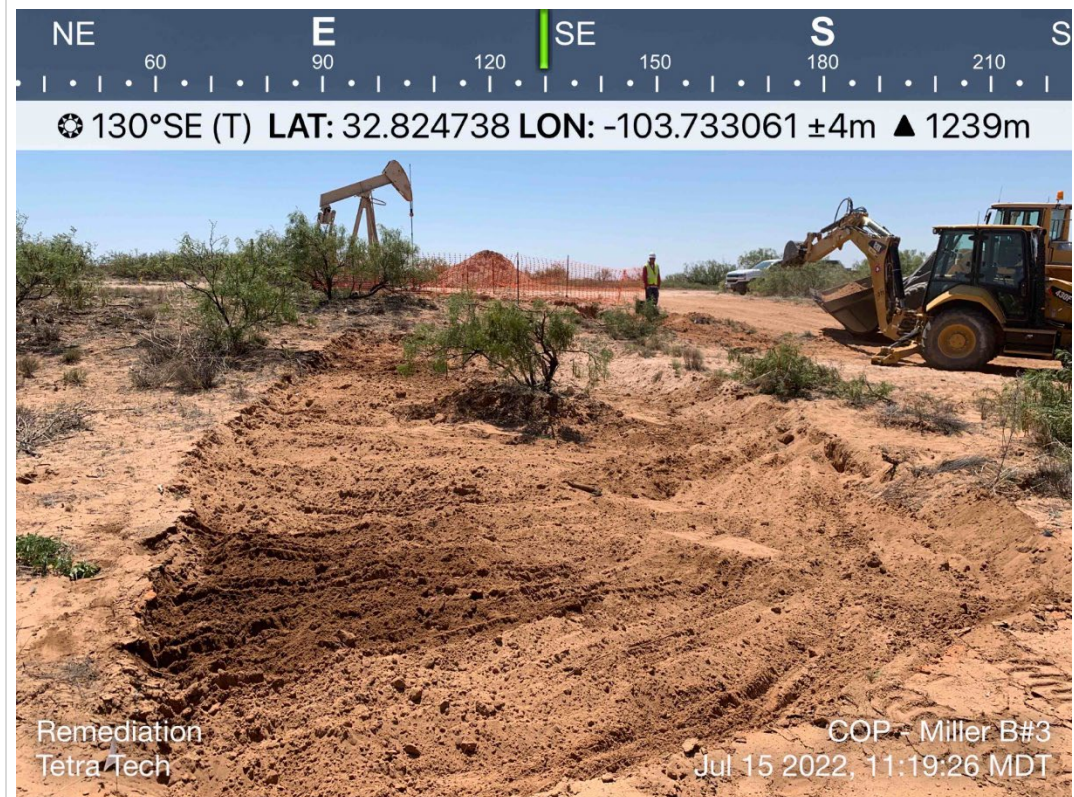
TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View south of Miller B Federal #003 excavation.	5
	SITE NAME	Miller B Federal #003 Flowline Release	7/14/2022



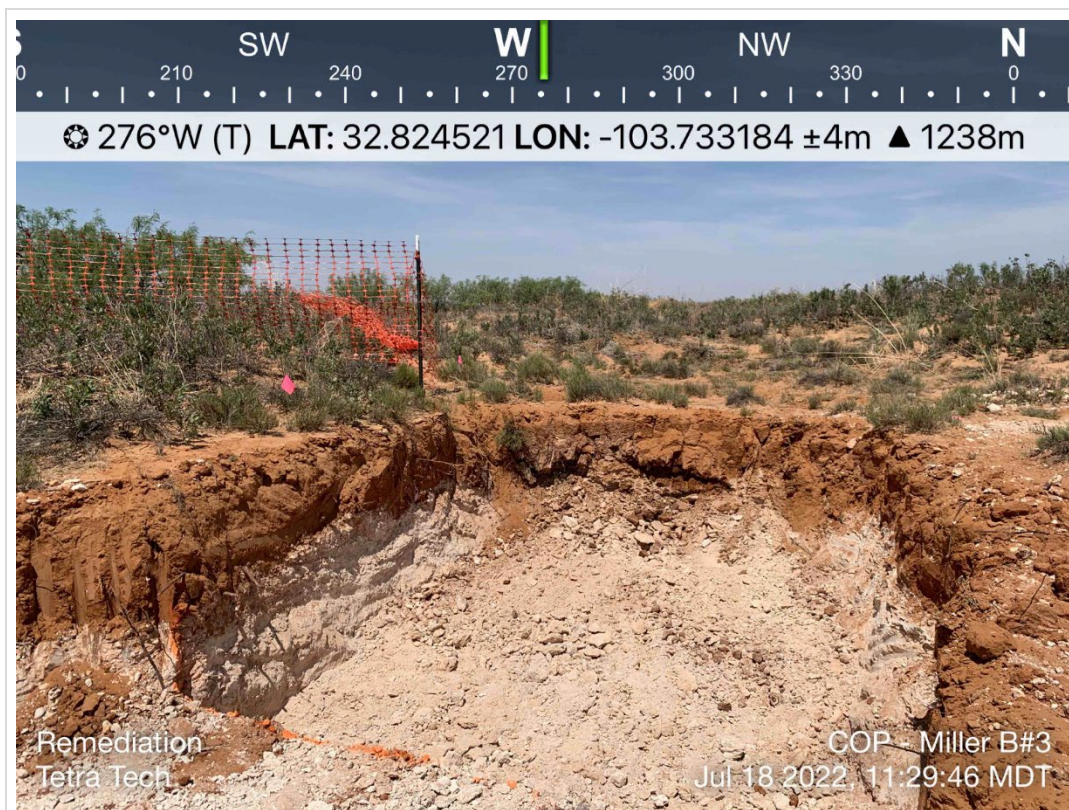
TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View west of Miller B Federal #003 excavation.	6
	SITE NAME	Miller B Federal #003 Flowline Release	7/14/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View southwest of scraped area over closed reserve pit.	7
	SITE NAME	Miller B Federal #003 Flowline Release	7/15/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View southeast of scraped area over closed reserve pit.	8
	SITE NAME	Miller B Federal #003 Flowline Release	7/15/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View west of WSW-3 expansion area.	9
	SITE NAME	Miller B Federal #003 Flowline Release	7/18/2022



TETRA TECH, INC. PROJECT NO. 212C-MD-02672	DESCRIPTION	View south-southwest of deepened excavation in FS-4 and FS-5 area.	10
	SITE NAME	Miller B Federal #003 Flowline Release	7/18/2022

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 134943

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 134943
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	10/19/2022