TETRA TECH

April 12, 2024

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

Re: Remediation Work Plan
ConocoPhillips
Red Hills West 16 State TC #012H Release
Unit Letter A, Section 16, Township 26 South, Range 30 East
Lea County, New Mexico
Incident ID# nTO1431831520

Ms. Maxwell:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips Company (ConocoPhillips) to assess a historical release that occurred at the Red Hills West 16 State TC #012H well (API No. 30-025-41706). The release footprint is located in Public Land Survey System (PLSS) Unit Letter A, Section 16, Township 26 South, Range 30 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.04935°, -103.67239°, 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 occurred on November 5, 2014. While transferring drilling mud from the rig's active system to storage frac tank, the frac tank was over filled. Approximately fifteen (15) barrels (bbls) of drilling mud (brine water) were released, of which fourteen (14) bbls were recovered. The approximate release extent is presented in Figure 3. Pumping was stopped and soil remediation began immediately. The NMOCD approved the initial C-141 on November 14, 2014, and subsequently assigned the release the Incident ID nTO1431831520. The initial C-141 form is included in Appendix A.

This incident is included in an Agreed Compliance Order-Releases (ACO-R) between ConocoPhillips and the NMOCD signed on May 7 and 9, 2019, respectively.

LAND OWNERSHIP

According to the NMOCD Oil and Gas Map, the Site is located on State Trust Land managed by the New Mexico State Land Office (NMSLO). A review of the NMSLO Land Status Map was completed, and the release footprint is located within active oil and gas lease LG36200000, under EOG Resources, Inc. Based on guidance provided by the NMSLO, as the release footprint is located on an active oil and gas lease, and the footprint is wholly located within the boundaries of the active oil and gas lease, no Remediation Right of Entry (ROE) is required at the Site.

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2020 VISUAL SITE INSPECTION AND CLOSURE REQUEST

Tetra Tech, on behalf of ConocoPhillips, conducted a visual site inspection in May 2020 at the release area to evaluate current conditions at the Site. The formerly impacted area was identified from the description in the C-141 and was corroborated by aerial imagery. Field observations included:

- The frac tank on the Red Hills West 16 State TC 12H lease pad was previously removed from the Site.
- The footprint of the former frac tank shows evidence of excavation and backfilling.
- No residual staining was noted at the point of release on the well pad.

Based on these findings, Tetra Tech completed a Closure Letter Report dated June 1, 2020, and submitted the report to NMOCD as part of the ACO submittals via the online file sharing platform CentreStack. A copy of the Closure Letter Report is available in the NMOCD online incident files.

The Closure Letter Report was rejected by NMOCD on March 28, 2023, with the following comments:

- *"Confirmation samples were not collected per 19.15.29 NMAC.*
- *1RP-3424 closed. Refer to incident #NTO1431831520 in all future communication.*
- *Submit a complete report through the OCD Permitting website by 6/28/2023."*

An extension request was granted by the NMOCD via email on September 25, 2023, for a new due date of December 1, 2023. A copy of the regulatory correspondence is included in Appendix B.

CULTURAL PROPERTIES PROTECTION

Tetra Tech, on behalf of ConocoPhillips, contracted SWCA Environmental Consultants (SWCA) to conduct an Archeological Resources Management Section (ARMS) review in the release area to comply with 19.2.24 New Mexico Administrative Code (NMAC). On October 10, 2023, SWCA completed a literature and file search using the State of New Mexico's New Mexico Cultural Resources Information System (NMCRIS) online database which included a review of known historic resources, including the built environment, archaeological sites, and State/National Register listed properties. Other sources include the Bureau of Land Management (BLM) General Land Office Records, which include land patent and general land office survey data.

In the review, SWCA found the area surrounding the site footprint (radius of 500 meters) has been subject to fourteen (14) cultural resource surveys, nine (9) of which are qualifying. Three (3) previously recorded sites are located outside of the project area but within the 500 meters search buffer. The project area is entirely located on NMSLO-managed lands and is covered by two (2) qualifying survey conducted within the last ten years (NMCRIS Activity No. 141048 and 127646) and is located on previously disturbed land from oil and gas construction activities.

All remediation work will remain within the previously qualifying survey area and the approved existing disturbance. If cultural materials are identified during ground disturbing activities, work will be stopped and the NMSLO will be contacted. A copy of the ARMS letter is included in Appendix B.

SITE CHARACTERIZATION

A site characterization was performed in accordance with 19.15.29.11 New Mexico State Administrative Code (NMAC) and the guidance document Process Updates re: Submissions of Form C-141 Release Notification and Corrective Actions (12/01/2023). A summary of the site characterization is presented below:

Shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (feet bgs)	> **55 feet bgs**
Method used to determine the depth to ground water	Direct Measurement
Did this release impact groundwater or surface water?	No
The minimum distance between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	0.82 miles
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	> 5 miles
An occupied permanent residence, school, hospital, institution, or church	> 5 miles
A spring or private domestic fresh water well used by less than five households for domestic or stock watering purposes	1.73 miles
Any other fresh water well or spring	> 5 miles
Incorporated municipal boundaries or a defined municipal fresh water well field	> 5 miles
A wetland	2.28 miles
A subsurface mine	> 5 miles
A (non-karst) unstable area	> 5 miles
Categorized risk of this well / site being in a karst geology	Medium
A 100-year floodplain	> 5 miles
Did the release impact areas not on an exploration, development, production, or storage site?	No

According to the New Mexico Office of the State Engineers (NMOSE) reporting system, there are no water wells within an 800-meter radius (approximately 1/2 mile) of the site. According to the NMOSE, there is one well within 1.73 miles (2,790 meters) with a total well depth of 280 feet below ground surface (bgs) and a depth to water of 180 feet bgs.

Depth-to-Groundwater Determination

As the available water level information is from a well farther than ½-mile away from the Site, ConocoPhillips elected to drill a boring to verify depth to groundwater. The proposed location of the depth to groundwater boring is located on BLM lands. Tetra Tech contacted Shelly Tucker (now Shelly Taylor) of the BLM via email to obtain approval of the location. An *Application for Permit to Drill* (WD-07) was submitted to the NMOSE on November 13, 2023. Approval was granted by the NMOSE on November 29, 2023; a copy of the approved permit and BLM approval is included in Appendix B.

On January 8, 2024, ConocoPhillips contracted a licensed well drilling subcontractor to drill a groundwater determination borehole (DTW) to 55 feet bgs in the pasture east of the Red Hills West 16 State TC #012H well pad. The borehole was temporarily set and screened using 2-inch PVC well materials. No water was present in the well during or after drilling. The well screen and casing were removed, and the borehole was plugged with 3/8-inch bentonite chips. The borehole coordinates are 32.049398°, -103.671311° and the boring location is indicated in Figure 3. The site characterization data, boring log, and temporary well diagram are included in Appendix C.

REGULATORY FRAMEWORK

Based upon the on-pad 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 (on-pad release footprint), the depth to groundwater boring and in accordance with Table I of 19.15.29.12 NMAC, the RRALs for the Site are as follows:

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

2023 SITE ASSESSMENT AND SAMPLING RESULTS

Tetra Tech personnel were initially onsite on October 10-11, 2023, to conduct assessment activities at the Site. Three (3) hand auger borings (AH-3, AH-5, and AH-6) were installed to 1 foot bgs around the perimeter of the release extent to achieve horizontal delineation. Two (2) hand auger borings (AH-1 and AH-2) were installed within the apparent release extent to achieve vertical delineation. Hand auger refusal was met at roughly 1-foot bgs; therefore, vertical delineation was not achieved due to the dense subsurface lithology of the pad beneath the release footprint.

A second extension request was approved by the NMOCD via email on December 4, 2024, for a new due date of January 30, 2024. Tetra Tech, on behalf of the responsible party ConocoPhillips, notified the NMOCD two (2) business days prior to conducting final confirmation sampling pursuant to 19.15.29.12.D(1)(a) NMAC, using a Notification of Sampling (C-141N) application on December 7, 2023. A copy of the regulatory correspondence is included in Appendix B.

Tetra Tech remobilized to the site on December 12, 2023, to install two (2) trenches (T-1 and T-2) to 6 feet bgs and 3 feet bgs, respectively, using a backhoe to evaluate the vertical extents of the release footprint. An additional hand auger boring (AH-4) was installed to east of the release extent to 1 foot bgs to complete horizontal delineation. Trench locations T-1 and T-2 were installed near the locations of AH-1 and AH-2. The hand auger borings and trench locations from the October and December 2023 sampling event are presented in Figure 3. Photographic documentation of the Site is included in Appendix D.

A total of twelve (12) soil samples were collected from the six (6) borings and two (2) trenches and sent to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chloride via Method SM4500, TPH via EPA Method 8015M, and BTEX via EPA Method 8261B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix E.

The laboratory analytical results from the October and December 2023 assessments are summarized in Table 1. There were no analytical results which exceeded the Site RRALs for any of the analyzed constituents. Horizontal and vertical delineation of the release was achieved as a result of the October and December 2023 additional assessment activities.

2024 NMOCD REJECTION

Tetra Tech submitted a Revised Characterization and Closure Request on January 26, 2024. The NMOCD rejected the Closure Request on February 2, 2024, with the following comments:

- *"Closure denied.*
- *Horizontal delineation must meet the requirements of the reclamation standards 19.15.29.13 NMAC (600 mg/kg Cl, 100 mg/kg TPH, 50 mg/kg BTEX, 10 mg/kg benzene) or OCD approved "background" values for the upper 4 feet of the impacted area. Confirmation soil samples must consist of five-point composite samples from the side wall and base and individual grab samples from any wet or discolored areas, representing a surface area of no more than 200 ft2 unless otherwise approved.*
- *Submit a report via the OCD permitting portal by 06/07/2024."*

A copy of the Revised Characterization and Closure Request is available in the NMOCD online incident files. A copy of the NMOCD rejection is found in Appendix B.

On February 12, 2024, a Microsoft Teams meeting was held with ConocoPhillips, Tetra Tech, and Ms. Ashley Maxwell of the NMOCD to clarify the February 2, 2024, rejection comments. During this call, Ms. Maxwell stated that the submitted report requested closure for the incident based on the discreet samples collected for assessment. Ms. Maxwell said a variance to use the assessment data would have needed to be requested and approved by NMOCD in lieu of five-point composite sampling. Since a variance request was not approved, the incident closure was rejected. Ms. Maxwell recommended that five-point composite samples, each representing a surface area of no more than 200 square feet, should be collected over the impacted surface area to satisfy the confirmation sampling requirements. In this meeting, Tetra Tech clarified that horizontal delineation was achieved. Table 1 has been modified to depict which samples demonstrate horizontal and vertical delineation.

2024 SITE ASSESSMENT AND COMPOSITE SAMPLING RESULTS

On February 27, 2024, Tetra Tech personnel mobilized to conduct the five-point composite confirmation sampling activities at the Site. Sixteen (16) five-point composite samples were collected within the release area; each point was collected at the surface, and each five-point composite sample is representative of 200 square feet. The release area is approximately 3,025 square feet. The five-point composite sampling grid is presented in Figure 3.

A total of sixteen (16) five-point composite samples were collected and sent to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chloride via Method SM4500, TPH via EPA Method 8015M, and BTEX via EPA Method 8261B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix E.

The laboratory analytical results from the February 2024 assessment are summarized in Table 2. The analytical results did not have exceedances above the Site RRALs for chlorides. However, analytical results associated with composite samples CS-1 through CS-7, and CS-10 exceeded the Site RRALs for Total TPH of 2,500 mg/kg and TPH (GRO+DRO) 1,000 mg/kg.

Tetra Tech remobilized to the Site on March 12, 2024, to conduct additional sampling to vertically delineate the identified TPH exceedances from the February 2024 sampling event. Three (3) trenches (T-3 through T-5) were each installed to 6 feet bgs using a backhoe to evaluate the vertical extents in the areas of CS-1 trough CS-7 and CS-10. The trench locations from the March 2024 sampling event are presented in Figure 3.

A total of twelve (12) soil samples were collected from the three (3) trenches and sent to Cardinal Laboratories in Hobbs, New Mexico to be analyzed for chloride via Method SM4500, TPH via EPA Method 8015M, and BTEX via EPA Method 8261B. A copy of the laboratory analytical report and chain-of-custody documentation are included in Appendix E.

The laboratory analytical results from the March 2024 additional assessment are summarized in Table 1. Trench T-3 exceeded the Site RRAL of 1,000 mg/kg for GRO+DRO with a concentration of 2,090 mg/kg. Horizontal and vertical delineation of the release has been achieved for both chloride and TPH.

REMEDIATION WORK PLAN

Based on the analytical results and the NMOCD rejection of the 2024 closure request, ConocoPhillips proposes to remove the remaining impacted material as shown in Figure 4. The release footprint in the area of CS-1 through CS-7, CS-10, and T-3 with soil concentrations above the Site RRALs for Total TPH and TPH (GRO+DRO) will be excavated using heavy equipment (backhoes, hoe rams, and track hoes) to a maximum depth of 2 feet below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the Site RRALs. Areas in close proximity to pressurized lines or other production equipment will be hand-dug to the maximum extent practicable and heavy equipment will come no more than 4 feet from any pressurized lines.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. The responsible party will notify the OCD two (2) business days prior to conducting final confirmation sampling pursuant to 19.15.29.12.D(1)(a) NMAC, using a Notification of Sampling (C-141N) application.

Confirmation bottom and sidewall samples representative of no more than 400 square feet will be collected for verification of remedial activities, and analyzed for TPH, BTEX, and chlorides as shown in Figure 5. Once results are received, the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is approximately 116 cubic yards.

SITE RECLAMATION AND MONITORING PLAN

Based on 19.15.29.13 NMAC, the areas disturbed by the remediation will be reclaimed once confirmation sampling results below the reclamation requirements (or RRALs, respectively, for areas below 4 feet bgs) are received. Once acceptable confirmation sample results are received, the excavation will be backfilled with clean material to pre-release grade. In accordance with 19.15.29.12 NMAC, the reclaimed area will contain a minimum of 4 feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0 or Method 4500.

As remedial activities will be within an active facility, the backfilled areas will not be reseeded. Areas reasonably needed for production or subsequent drilling operations will be reclaimed and revegetated as soon as they are no longer reasonably needed and will meet 19.15.9.13 NMAC at time of plugging and abandonment.

Reclamation activities will be implemented in consultation with the NMSLO in accordance with 19.2.100.67 NMAC for surface reclamations on State Oil and Gas Leases. ConocoPhillips will notify the NMSLO when reclamation and revegetation are complete.

CONCLUSION

Based on the results of the 2023 and 2024 site assessment and characterization, ConocoPhillips will remediate soils within the release extent impacted with Total TPH and TPH (GRO+DRO) above Site RRALs. The proposed remediation activities will be conducted within 90 days of acceptance of the proposed plan. If you have any questions concerning the additional assessment activities for the Site or the proposed remediation work plan, please call me at (512) 596-8201 or Christian at (512) 338-2861.

Sincerely,
Tetra Tech, Inc.

Lisbeth Chavira
Project Manager

Samantha K. Abbott, P.G.
Senior Project Manager

cc:
Mr. Moises Cantu Garcia, PBU – ConocoPhillips
Ms. Tami Knight, ECO

LIST OF ATTACHMENTS

Figures:

Figure 1 – Overview Map
Figure 2 – Topographic Map
Figure 3 – Approximate Release Extent and Site Assessment & DTW Location
Figure 4 – Proposed Remediation Extent
Figure 5 – Alternative Confirmation Plan

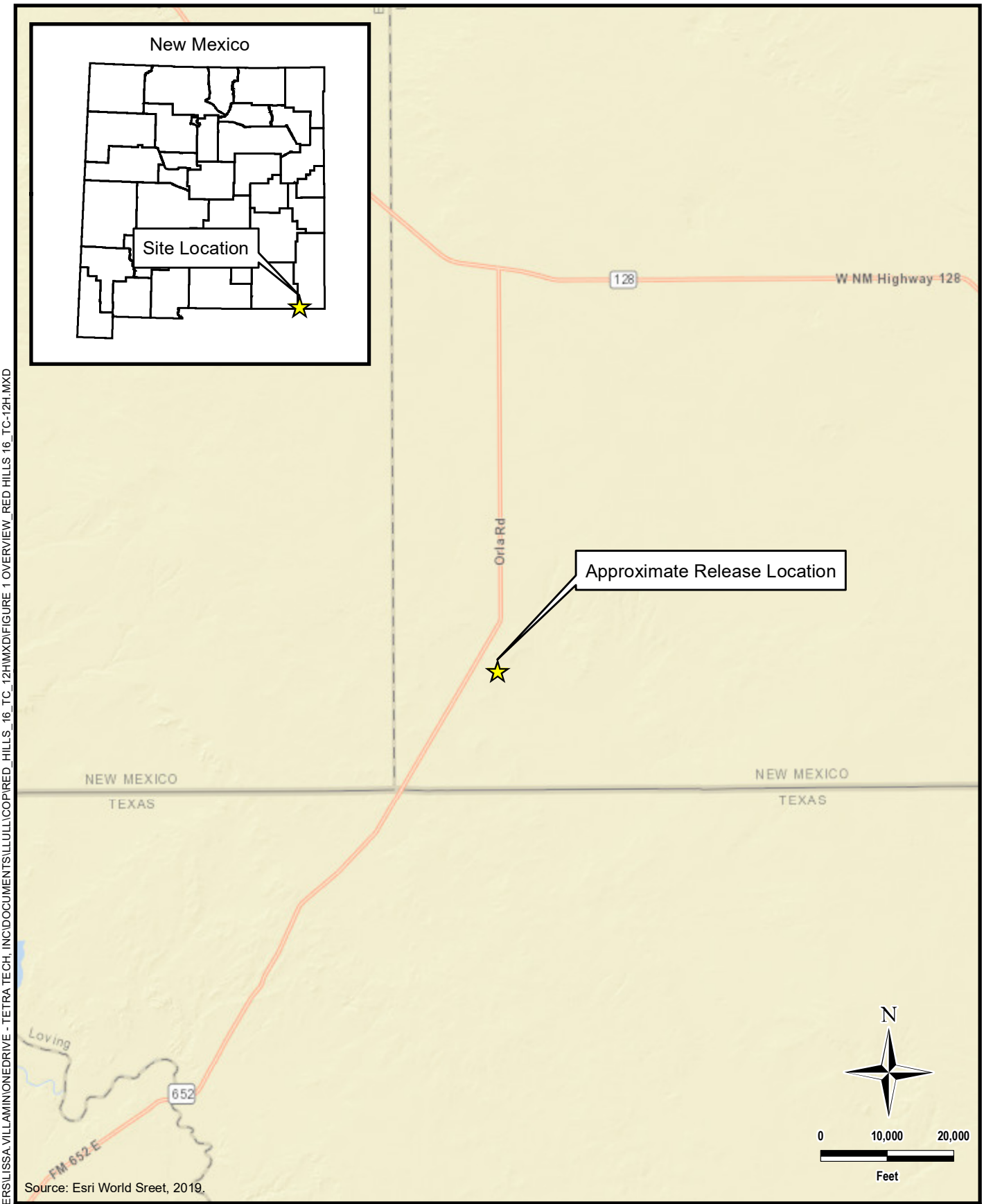
Tables:

Table 1 – Summary of Analytical Results – 2023 Soil Assessment
Table 2 – Summary of Analytical Results – 2024 Soil Composite Sampling Assessment

Appendices:

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

FIGURES



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DOCUMENT PATH: C:\USERS\LISSA.VILLAMIN\ONEDRIVE - TETRA TECH, INC\DOCUMENTS\LLULL\COPIRED_HILLS_16_TC_12H\MXD\FIGURE 1 OVERVIEW_RED HILLS 16_TC-12H.MXD

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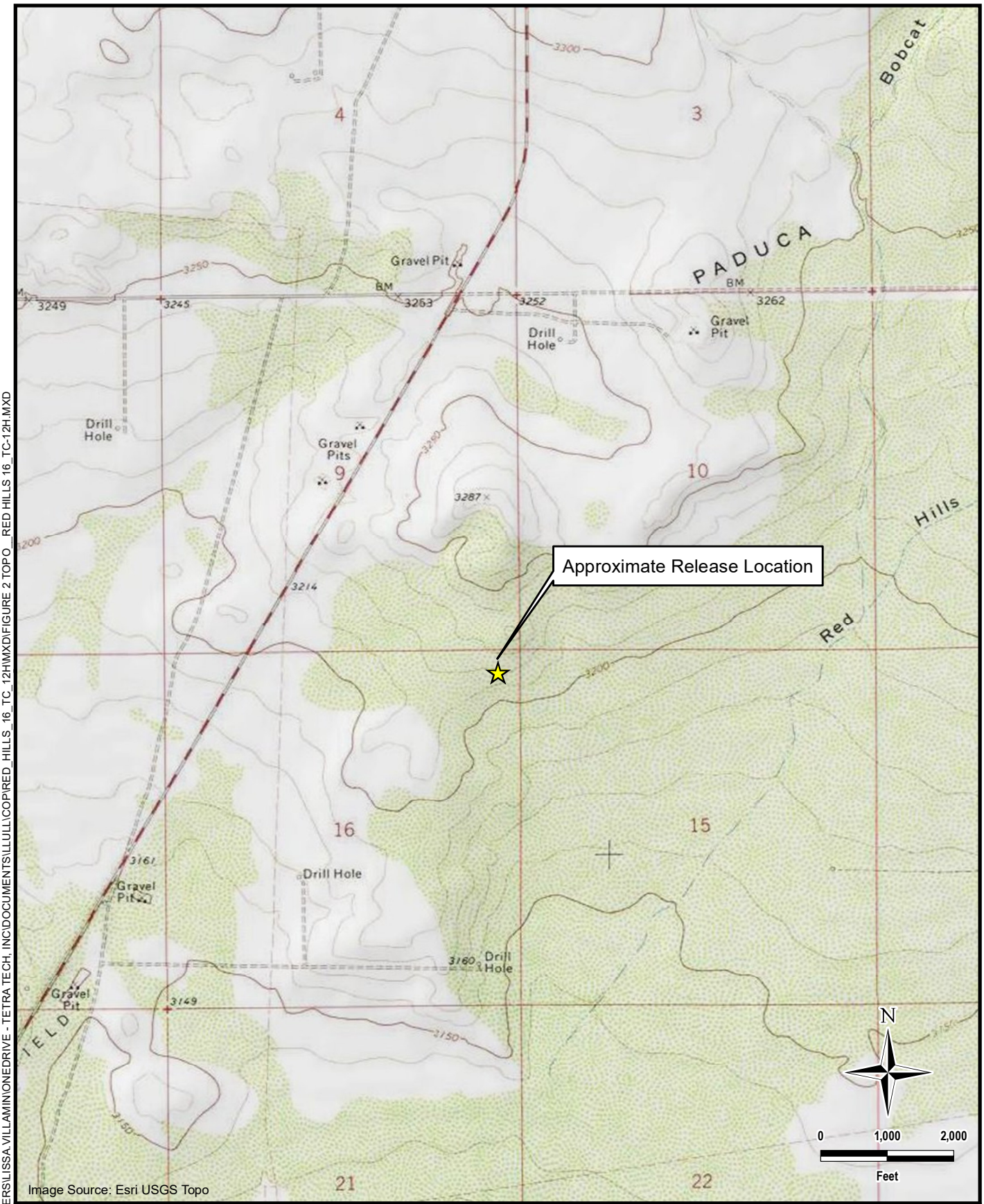
CONOCOPHILLIPS

NTO1431831520
LEA COUNTY, NEW MEXICO
(32.04935°, -103.67239°)

RED HILLS WEST 16 STATE TC 12H RELEASE OVERVIEW MAP

PROJECT NO.:	212C-MD-03246
DATE:	OCTOBER 24, 2023
DESIGNED BY:	LMV

Figure No.
1



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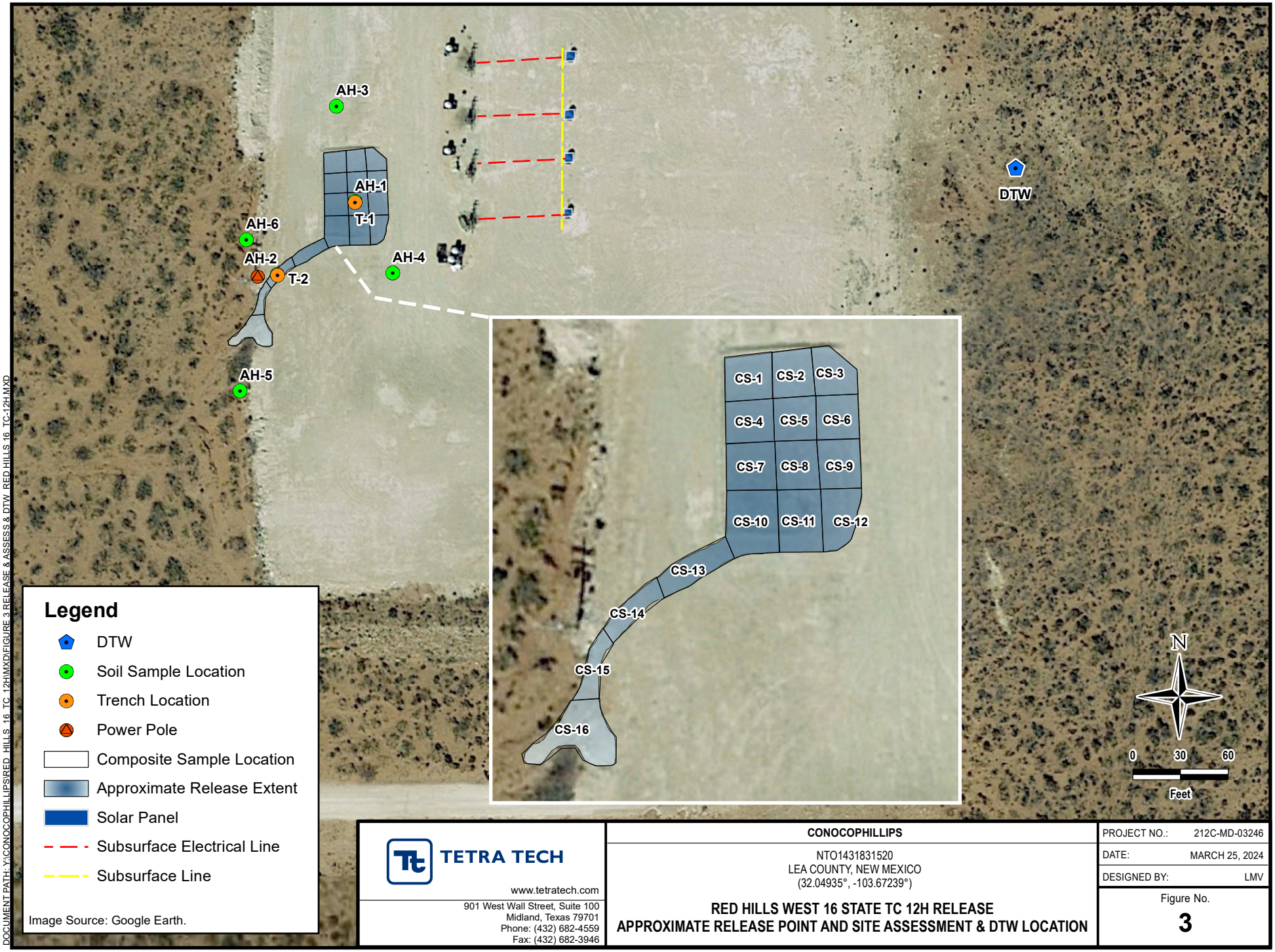
CONOCOPHILLIPS

NTO1431831520
LEA COUNTY, NEW MEXICO
(32.04935°, -103.67239°)

RED HILLS WEST 16 STATE TC 12H RELEASE
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-03246
DATE:	OCTOBER 24, 2023
DESIGNED BY:	LMV

Figure No.
2



DOCUMENT PATH: Y:\CONOCOPHILLIPS\RED HILLS 16 TC 12H\MXD\FIGURE 3 RELEASE & ASSESS & DTW RED HILLS 16 TC-12H.MXD

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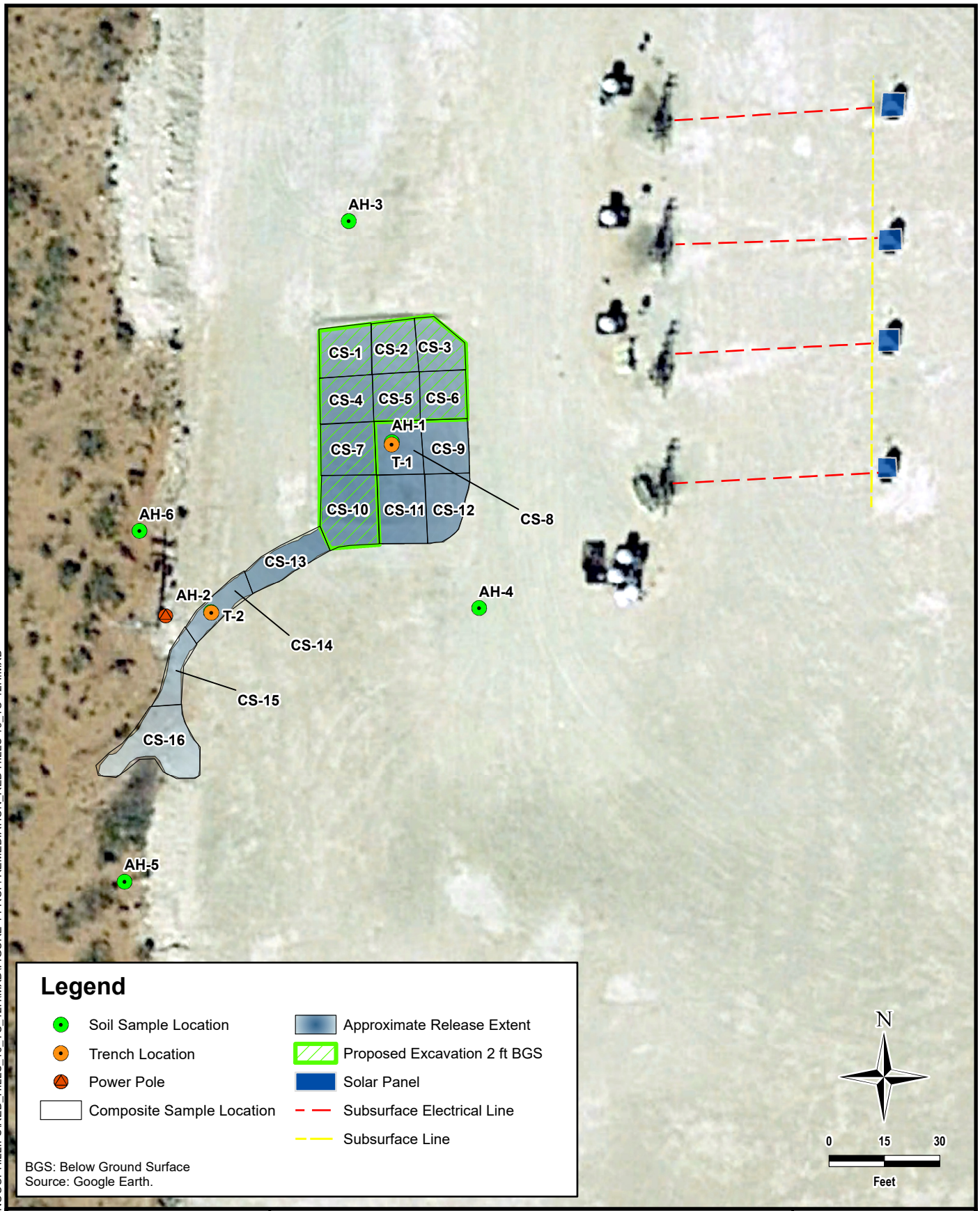
CONOCOPHILLIPS

NTO1431831520
LEA COUNTY, NEW MEXICO
(32.04935°, -103.67239°)

RED HILLS WEST 16 STATE TC 12H RELEASE
APPROXIMATE RELEASE POINT AND SITE ASSESSMENT & DTW LOCATION

PROJECT NO.:	212C-MD-03246
DATE:	MARCH 25, 2024
DESIGNED BY:	LMV

Figure No.
3



DOCUMENT PATH: Y:\CONOCOPHILLIPS\RED_HILLS_16_TC_12H\MXD\FIGURE 4 PROP. REMEDIATION_RED HILLS 16_TC-12H.MXD

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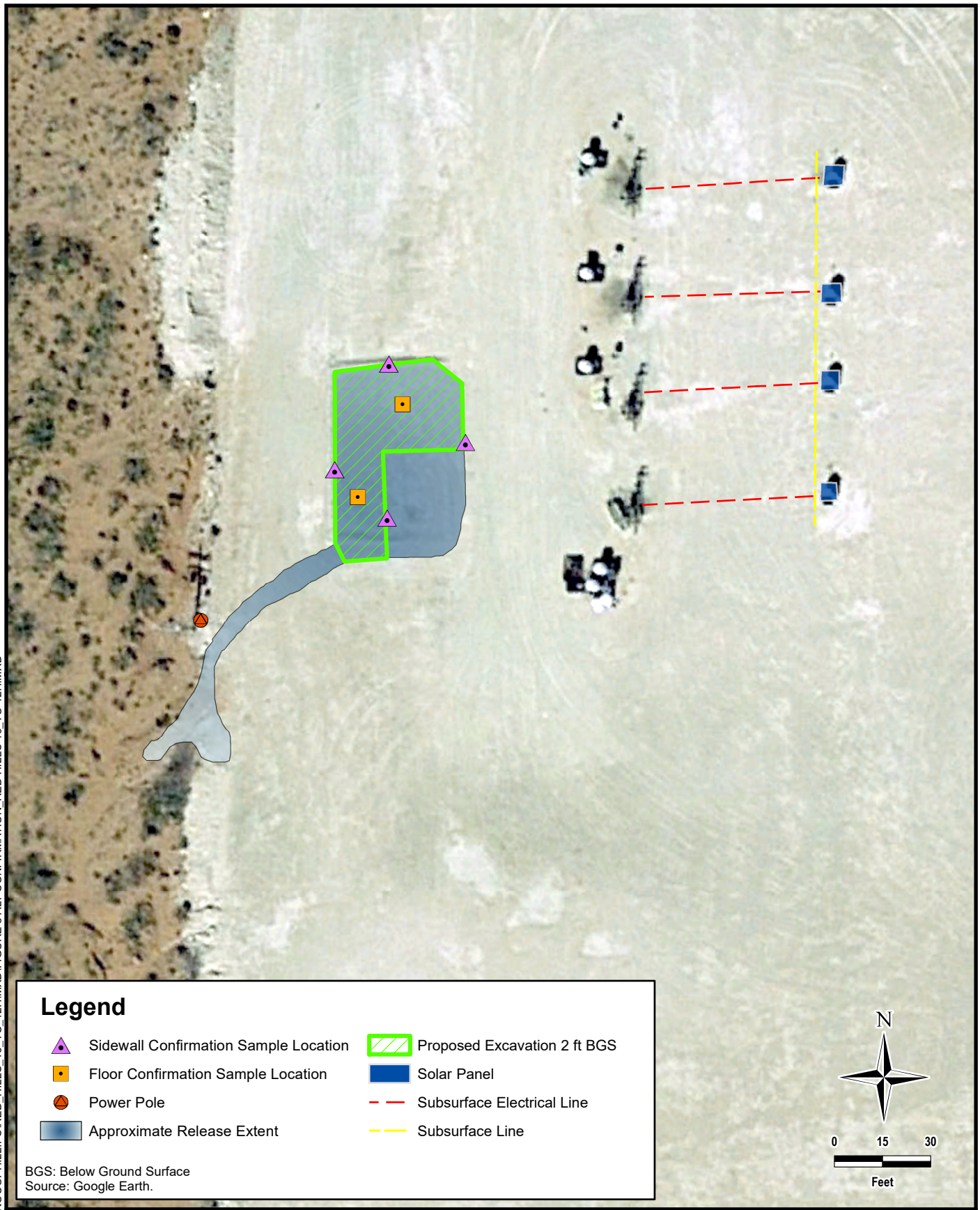
CONOCOPHILLIPS

NTO1431831520
LEA COUNTY, NEW MEXICO
(32.04935°, -103.67239°)

RED HILLS WEST 16 STATE TC 12H RELEASE
PROPOSED REMEDIATION EXTENT

PROJECT NO.:	212C-MD-03246
DATE:	MARCH 25, 2024
DESIGNED BY:	LMV

Figure No.
4



DOCUMENT PATH: Y:\CONOCOPHILLIPS\RED_HILLS_16_TC_12H\MXD\FIGURE 5 ALT CONFIRMATION_RED HILLS 16_TC-12H.MXD

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CONOCOPHILLIPS

NTO1431831520
LEA COUNTY, NEW MEXICO
(32.04935°, -103.67239°)

RED HILLS WEST 16 STATE TC 12H RELEASE
ALTERNATIVE CONFIRMATION PLAN

PROJECT NO.:	212C-MD-03246
DATE:	MARCH 25, 2024
DESIGNED BY:	LMV

Figure No.
5

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT- nTO1431831520
CONOCOPHILLIPS
RED HILLS WEST 16 STATE TC 12H
LEA COUNTY, NM

19.15.29.12 NMAC Closure Criteria for Soils Impacted by a Release (51-100ft):				Chlorides[1]		BTEX[2]										TPH[3]							
				< 10,000 mg/kg		< 10 mg/kg								< 50 mg/kg		GRO		DRO		EXT DRO		< 2,500 mg/kg	< 1,000 mg/kg
Sample ID	Sample Date	Sample Depth Interval	Field Screening Results	Chloride		Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		C_6 - C_{10}		> C_{10} - C_{28}		> C_{28} - C_{36}		Total TPH (GRO+DRO+EXT DRO)	GRO+DRO
		ft. bgs	Chlorides ppm	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg
VERTICAL DELINEATION																							
AH-1	10/11/2023	0-1	2,190	2,240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		12.3		<10.0		12.3	12.3
T-1	12/12/2023	0-1	-	720		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
		2-3	-	1,760		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		20.9		<10.0		20.9	20.9
		3-4	-	3,600		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
		5-6	-	208		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
AH-2	10/11/2023	0-1	1,250	848		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
T-2	12/12/2023	0-1	-	480		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
		2-3	-	48		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
T-3	3/12/2024	0-1	-	640		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		2,090		333		2,423	***2,090***
		2-3	-	640		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		73.8		<10.0		73.8	73.8
		3-4	-	960		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
		5-6	-	304		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
T-4	3/12/2024	0-1	-	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
		2-3	-	128		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		18.1		<10.0		18.1	18.1
		3-4	-	224		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		41.7		<10.0		41.7	41.7
		5-6	-	592		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
T-5	3/12/2024	0-1	-	96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		342		23.7		366	342
		2-3	-	160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		314		24.5		338.5	314
		3-4	-	80		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		273		13.8		286.8	273
		5-6	-	240		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
HORIZONTAL DELINEATION																							
AH-3	10/11/2023	0-1	580	256		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
AH-4	12/12/2023	0-1	-	64		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
AH-5	10/11/2023	0-1	85.1	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0
AH-6	10/11/2023	0-1	25.6	<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		<10.0	<10.0

NOTES:

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

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

Shaded rows indicate intervals proposed for excavation.

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
2024 SOIL ASSESSMENT- COMPOSITE SAMPLING- nTO1431831520
CONOCOPHILLIPS
RED HILLS WEST 16 STATE TC 12H
LEA COUNTY, NM

19.15.29.12 NMAC Closure Criteria for Soils Impacted by a Release (51-100ft):				Chlorides[1]		BTEX[2]										TPH[3]							
				< 10,000 mg/kg		< 10 mg/kg								< 50 mg/kg		GRO		DRO		EXT DRO		< 2,500 mg/kg	< 1,000 mg/kg
Sample ID	Sample Date	Sample Depth Interval	Field Screening Results	Chloride		Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		C_6 - C_{10}		> C_{10} - C_{28}		> C_{28} - C_{36}		Total TPH (GRO+DRO+EXT DRO)	GRO+DRO
		ft. bgs	Chlorides ppm	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	mg/kg
CS-1	2/27/2024	0-0.5	-	960		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		2,910		1,530		***4,440***	***2,910***
CS-2	2/27/2024	0-0.5	-	2,400		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		1,760		782		***2,542***	***1,760***
CS-3	2/27/2024	0-0.5	-	480		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		3,440		1,880		***5,320***	***3,440***
CS-4	2/27/2024	0-0.5	-	2,400		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		7,310		3,010		***10,320***	***7,310***
CS-5	2/27/2024	0-0.5	-	1,410		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		5,670		2,580		***8,250***	***5,670***
CS-6	2/27/2024	0-0.5	-	992		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		2,780		1,450		***4,230***	***2,780***
CS-7	2/27/2024	0-0.5	-	1,100		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		4,700		2,070		***6,770***	***4,700***
CS-8	2/27/2024	0-0.5	-	5,840		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		546		284		830	546
CS-9	2/27/2024	0-0.5	-	3,520		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		299		176		475	299
CS-10	2/27/2024	0-0.5	-	1,740		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		1,980		1,090		***3,070***	***1,980***
CS-11	2/27/2024	0-0.5	-	1,120		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
CS-12	2/27/2024	0-0.5	-	3,840		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		344		182		526	344
CS-13	2/27/2024	0-0.5	-	2,320		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		750		415		1165	750
CS-14	2/27/2024	0-0.5	-	2,320		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		11.8		<10.0		11.8	11.8
CS-15	2/27/2024	0-0.5	-	288		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-
CS-16	2/27/2024	0-0.5	-	640		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-	-

NOTES:

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

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

Shaded rows indicate intervals proposed for excavation.

APPENDIX A
C-141 Forms

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

HOBBS OCD
NOV 14 2014
RECEIVED

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 : *Conoco Phillips Company*	Contact : *Dennis Martinez*
Address : *3300 N. A St. Midland, TX*	Telephone No. : *432-741-1818*
Facility Name : *H&P Rig 486*	Facility Type : *Drilling Rig*

Surface Owner	Mineral Owner	API No. 30-025-41706

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	16block	*T26S*	*R32E*					*Lea*

Lea County, New Mexico Section 16 Block T26S R32E

Latitude : *32 02' 57.40N"* **Longitude** : *103 40' 18.97"*

NATURE OF RELEASE

Type of Release : *Spill to ground*	Volume of Release : *15 bbl*	Volume Recovered: *14bbl*
Source of Release : *Frac Pit*	Date and Hour of Occurrence *11/5/2014 @2230 hrs.*	Date and Hour of Discovery 11/5/2014 @2235hrs.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	
By Whom? *Tommy Turner*	Date and Hour : *11/06/2014 @0930 hrs*	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

None

Describe Cause of Problem and Remedial Action Taken.*

On Tuesday, November 05, 2014 at approximately 2230 hrs. while transferring drilling mud from the rigs active pit system to storage frac tank, the frac tank was over filled causing approximately 15 bbl of drilling mud (Brine Water) to spill onto the ground. Pumping was stopped and remediation began immediately.

Describe Area Affected and Cleanup Action Taken.*

The area affected was just off the caliche drilling pad where a small stream of fluid flowed. Roustabout company was dispatched to location with a loader to pick up soiled area which was hauled off to disposal site.

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: *Dennis R. Martinez*	OIL CONSERVATION DIVISION	
Printed Name: *Dennis R. Martinez*	Approved by Environmental Specialist: [signature]	
Title: *Well Site Safety Rep*	Approval Date: 11-14-14	Expiration Date: 1-14-15
E-mail Address: *Dennis.R.Martinez@contractor.conocophillips.com*	Conditions of Approval: Site Sample as per Delineate, remediate as per NMOCD guide. Submit Final C-141 by 1-14-15	Attached ☐
Date: *11/07/2014* Phone: *432-688-9012*		1RP-3424

* Attach Additional Sheets If Necessary

ogrid 217817
nTO1431831520
pTO1431831724

NOV 14 2014

State of New Mexico
Oil Conservation Division

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
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: Moises H Cantu Garcia Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

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: Moises H Cantu Garcia _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

APPENDIX B
Regulatory Correspondence

Chavira, Lisbeth

From: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Sent: Monday, September 25, 2023 8:29 AM
To: Abbott, Sam; Enviro, OCD, EMNRD
Cc: Llull, Christian; Chavira, Lisbeth; Maxwell, Ashley, EMNRD; Llull, Christian; Chavira, Lisbeth; Smith, Cory, EMNRD; Bratcher, Michael, EMNRD
Subject: RE: [EXTERNAL] Extension Request - Application ID 201345 (nTO1431831520)

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

Sam,
The extension request for nTO1431831520 is approved. The new due date is December 1, 2023.

If an approved workplan is found, it will need to have an email, stamps, etc. from the OCD that shows it was received and approved by the OCD prior to the rule change and will need to be submitted to the OCD ASAP. If the approved workplans are already uploaded into the files available on the OCD Permitting website the workplan will not need to be resubmitted.

Please let me know if you have any questions or require any additional information.

Thank you,
Brittany Hall • Environmental Specialist
Environmental Bureau Projects Group
EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87110
505.517.5333 | Brittany.Hall@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd/

From: Abbott, Sam <Sam.Abbott@tetratech.com>
Sent: Friday, September 22, 2023 3:22 PM
To: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Llull, Christian <Christian.Llull@tetratech.com>; Chavira, Lisbeth <LISBETH.CHAVIRA@tetratech.com>; Maxwell, Ashley, EMNRD <Ashley.Maxwell@emnrd.nm.gov>; Llull, Christian <Christian.Llull@tetratech.com>; Chavira, Lisbeth <LISBETH.CHAVIRA@tetratech.com>; Smith, Cory, EMNRD <cory.smith@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: [EXTERNAL] Extension Request - Application ID 201345 (nTO1431831520)

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

Ms. Hall,

On behalf of ConocoPhillips, Tetra Tech is requesting an extension to December 1, 2023 to complete any necessary additional assessment activities and associated reporting for the Red Hills West 16 State TC No.012H Release site (**nTO1431831520**).

A Closure Letter Report dated June 1, 2020 was rejected by the OCD on 3/28/2023 with the following comments: "Confirmation samples were not collected per 19.15.29 NMAC. 1RP-3424 closed. Refer to incident #NTO1431831520 in all future communication. Submit a complete report through the OCD Permitting website by 6/28/2023."

The OCD, ConocoPhillips, and Tetra Tech had a meeting on September 20, 2023 to discuss the OCD rejections of a select number of submitted closure reports associated with the Agreed Compliance Order (ACO) for open release incidents between ConocoPhillips and OCD. In this meeting, ConocoPhillips and Tetra Tech received clarification from the OCD on the closure requirements for the historical releases. Based on this meeting, ConocoPhillips will assess each remaining open release incident associated with the ACO to determine if there is an approved remediation work plan associated with the incident. If so, ConocoPhillips will proceed to perform the approved scope of work contained in the work plan. If there is not an approved work plan associated with the release incident, then ConocoPhillips will proceed with any necessary assessment and/or remediation activities in compliance with 19.15.29 NMAC.

ConocoPhillips is committed to addressing this open release incident in compliance with OCD regulations. Additional time is required to review incident records, perform additional assessment sampling if necessary, and prepare a revised report for OCD review. A complete report will be submitted to the OCD within the requested timeframe.

Thank you,
Sam

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

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www.swca.com

October 12, 2023

TO: Ethan Ortega, Division Director & Archaeologist, New Mexico State Land Office, Santa Fe, New Mexico

FROM: SWCA Environmental Consultants

SUBJECT: Completion of an Archaeological Records Management Section (ARMS) Review for the Red Hills West State 16 W1 Release Remediation Project on New Mexico State Land Office (NMSLO) lands in Lea County, NM

Company Ref No: None-Provided

PROJECT DESCRIPTION:

Tetra Tech, Inc. has requested that SWCA Environmental Consultants (SWCA) conduct an Archaeological Resources Management Section (ARMS) review for an inadvertent release in Lea County, New Mexico. The proposed project is on lands managed by the New Mexico State Land Office (NMSLO) approximately 45.86 kilometers (28.5 miles) southwest of Jal, NM in T26S R32E, Section 16.

A literature and file search were conducted on October 10, 2023, using the New Mexico Cultural Resources Information System (NMCRIS) online database which included a review of known cultural resources, such as the built environment, archaeological sites, and State/National Register listed properties. Other sources reviewed include the BLM GLO Records web site, http://www.glorecords.blm.gov, which include land patent and general land office survey data. As this area was not settled by Spain, land grant records were not reviewed. The review was conducted for the Area of Potential Effect (APE), consisting of the inadvertent release area and a 50-foot buffer, and 500 meters (m) (0.31 mile) surrounding the APE. The land the proposed project is located on is part of the June 21, 1934: State Grant-School Sec Patent (48 Stat. 1185) patented on January 4, 1960.

Recommendation:

The project area and surrounding 500 m (0.31 mile) have been subject to fourteen (14) cultural resource surveys, nine (9) of which are qualifying. Three (3) previously recorded sites are located outside of the project area but within the 500-m (0.31-mile) search buffer. The project area is entirely located on NMSLO-managed lands and is covered by two (2) qualifying survey conducted within the last ten years (NMCRIS Activity Numbers 131674 and 127646) and is located on previously disturbed land from oil and gas construction activities. SWCA recommends the completion of an ARMS letter to satisfy the requirements of release remediation. All remediation work will remain within the previously qualifying survey area and the approved existing disturbance. If cultural materials are identified during ground disturbing activities, work must stop and the NMSLO must be contacted.

Information regarding the findings can be found in Table 1-2 and Figure 1.

Archaeologist
Paisley DeFreese
Attached: (1) Review Results, (1) ARMS Map

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Albuquerque, New Mexico 87109
Tel 505.254.1115 Fax 505.254.1116
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Archaeological Resources Management Section (ARMS) Review Results

Table 1. Cultural surveys within 500 meters (0.32 mile) of proposed project.

NMCRIS No.	Performing Organization	Date of Investigation	Acres Surveyed	Sites Visited
7348	Pecos Archaeological Consultants	9/27/1984	96.96	0
12016	New Mexico Archaeological Services, Inc	8/18/1983	61	1
21396	Pecos Archaeological Consultants	4/22/1988	145.45	2
63533	Lone Mountain Archaeological Services	1/19/1999	16900	69
119095	Southern NM Archaeological Services	9/9/2010	42.11	0
127646	Lone Mountain Archaeological Services	3/13/2013	5469.59	35
131009	Lone Mountain Archaeological Services	7/2/2014	13.77	0
131674	Lone Mountain Archaeological Services	9/5/2014	603.75	5
134730	Statistical Research, Inc.	11/6/2015	96.25	0
139387	Boone Archaeological Consultants, LLC.	11/23/2017	17.22	0
145866	SWCA Environmental Consultants	9/22/2019	1484.03	4
148686	Boone Archaeological Consultants, LLC.	8/26/2021	14.33	0
149643	Boone Archaeological Consultants, LLC.	1/21/2022	2.89	0
152596	Boone Archaeological Consultants, LLC.	3/23/2023	10.56	0

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Table 2. Cultural resources within 500 meters (0.32 mile) of the proposed project area.

*Redacted

*Redacted

Figure 1. NMCRIS screenshot showing location of the proposed Red Hills West State 16 W1 Release Remediation Project area (blue polygon) with 500 m (0.31 mile) buffer area (blue circle). Previously conducted investigations are brown and yellow polygons, and previously recorded sites are orange polygons.

Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 753551
File Nbr: C 04787

Nov. 29, 2023

CHRISTINA LLULL
TETRA TECH ON BEHALF OF CONOCOPHILLIPS
8911 N CAPITAL OF TX HWY #2310
AUSTIN, TX 78759

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.

* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.

* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

Vanessa Clements
(575)622-6521

Enclosure

explore

File No. C- 4787

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL

A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And/Or Recovery	☐ Ground Source Heat Pump
☐ Exploratory Well*(Pump test)	☐ Construction Site/Public Works Dewatering	☒ Other(Describe):
☐ Monitoring Well	☐ Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

*New Mexico Environment Department-Drinking Water Bureau (NMED-DWB) will be notified if a proposed exploratory well is used for public water supply.

☒ Temporary Request - Requested Start Date: 11/27/2023 Requested End Date: 11/27/2024

Plugging Plan of Operations Submitted? ☒ Yes ☐ No

1. APPLICANT(S)

Name: Tetra Tech on behalf of ConocoPhillips	Name:
Contact or Agent: check here if Agent ☐ Christian Llull	Contact or Agent: check here if Agent ☐
Mailing Address: 8911 N Capital of Texas Hwy #2310	Mailing Address:
City: Austin	City:
State: Zip Code: Texas 78759	State: Zip Code:
Phone: 512-338-1667 ☐ Home ☒ Cell Phone (Work):	Phone: ☐ Home ☐ Cell Phone (Work):
E-mail (optional): Christian.Llull@tetratech.com	E-mail (optional):

RECEIVED JUL 7 2023

FOR OSE INTERNAL USE Application for Permit, Form WR-07, Rev 07/12/22

File No.: C-4787	Trn. No.: 753951	Receipt No.: 2-46390
Trans Description (optional): EXPL		
Sub-Basin: CUB	PCW/LOG Due Date: 11-29-24	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range*) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
C-4787 Pod1 Red Hills - DTW	32.049375°	-103.671003°	Unit Letter D, Section 15, Township 26S, Range 32E

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ■ No **If yes, how many**_____

Other description relating well to common landmarks, streets, or other:

Well is on land owned by: Bureau of Land Management

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. **Attached?** ☐ Yes ■ No
If yes, how many_____

Approximate depth of well (feet): 55	Outside diameter of well casing (inches):
Driller Name: John Scarborough	Driller License Number: WD1188

OSE DIT NOV 17 2023 PM1:13

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Drilling temporary monitoring well to determine depth to groundwater.

The well will be installed on a right of way (ROW) on BLM land. BLM was emailed on 11/13/2023 for access approval. BLM approved the DTW location on 11/13/2023 (attached).

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory:	**Pollution Control and/or Recovery:**	**Construction De-Watering:**	**Mine De-Watering:**
Is proposed well a future public water supply well? ☐ Yes ☐ NO If Yes, an application must be filed with NMED-DWB, concurrently. ☐ Include a description of the requested pump test if applicable.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge. ☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of. **Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring ☒ The reason and duration of the monitoring is required.			

ACKNOWLEDGEMENT

I, We (name of applicant(s)), CHRISTIAN M. LLULL
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

[signature]
Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

OSE DII NOV 17 2023 PM1:03

This application is:

☒ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 29th day of November 20 23, for the State Engineer,

Mike A. Hamman, P.E., State Engineer

By: K.Parekh — Signature
Kashyap Parekh — Print

Title: Water Resources Manager I
Print

FOR OSE INTERNAL USE — Application for Permit, Form WR-07 Version 07/12/22

File No.: C-4787	Trn No.: 753551

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-16 Construction of a water well by anyone without a valid New Mexico Well Driller License is illegal, and the landowner shall bear the cost of plugging the well by a licensed New Mexico well driller. This does not apply to driven wells, the casing of which does not exceed two and three-eighths inches outside diameter.

17-1A Depth of the well shall not exceed the thickness of the valley fill.

17-4 No water shall be appropriated and beneficially used under this permit.

17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

Trn Desc: C 04787 POD1

File Number: C 04787
Trn Number: 753551

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.

17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.

17-C2 No water shall be diverted from this well except for testing purposes which shall not exceed ten (10) cumulative days, and well shall be plugged or capped on or before , unless a permit to use water from this well is acquired from the Office of the State Engineer.

17-G If artesian water is encountered, the well driller shall comply with all rules and regulations pertaining to the drilling and casing of artesian wells.

17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

17-Q The State Engineer retains jurisdiction over this permit.

17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

LOG The Point of Diversion C 04787 POD1 must be completed and the Well Log filed on or before 11/28/2024.

IT IS THE PERMITTEE'S RESPONSIBILITY TO OBTAIN ALL AUTHROIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd:	Date Rcvd. Corrected:
Formal Application Rcvd: 11/29/2023	Pub. of Notice Ordered:
Date Returned - Correction:	Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 29 day of Nov A.D., 2023

Mike A. Hamman, P.E., State Engineer

By: K. Parekh
KASHYAP PAREKH

Trn Desc: C 04787 POD1

File Number: C 04787
Trn Number: 753551

OFFICE OF THE STATE ENGINEER/INTERSTATE STREAM COMMISSION – ROSWELL OFFICE

OFFICIAL RECEIPT NUMBER: 2 - 46390 DATE: 11/17/23 FILE NO.: Lea

TOTAL: 5.00 RECEIVED: Five #/100 DOLLARS CHECK NO.: 7878 CASH: _____

PAYOR: Tetra Tech ADDRESS: 8911 N. Capital of Texas Hwy #2310 CITY: Austin STATE: TX

ZIP: 78759 RECEIVED BY: AR

INSTRUCTIONS: Indicate the number of actions to the left of the appropriate type of filing. Complete the receipt information. **Original** to payor; **pink** copy to Program Support/ASD; and **yellow** copy for Water Rights. If a mistake is made, void the original and all copies and submit to Program Support/ASD as part of your daily deposit.

A. Ground Water Filing Fees

___	1.	Change of Ownership of Water Right	$ 2.00
___	2.	Application to Appropriate or Supplement Domestic 72-12-1 Well	$ 125.00
___	3.	Application to Repair or Deepen 72-12-1 Well	$ 75.00
___	4.	Application for Replacement 72-12-1 Well	$ 75.00
___	5.	Application to Change Purpose of Use 72-12-1 Well	$ 75.00
1	6.	Application for Stock Well/Temp. Use	$ 5.00
___	7.	Application to Appropriate Irrigation, Municipal, or Commercial Use	$ 25.00
___	8.	Declaration of Water Right	$ 1.00
___	9.	Application for Additional Point of Diversion Non 72-12-1 Per Well	$ 25.00
___	10.	Application to Change Place or Purpose of Use Non 72-12-1 Well	$ 25.00
___	11.	Application to Change Point of Diversion and Place and/or Purpose of Use from Surface Water to Ground Water	$ 50.00
___	12.	Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Ground Water	$ 50.00
___	13.	Application to Change Point of Diversion of Non 72-12-1 Well	$ 25.00
___	14.	Application to Repair or Deepen Non 72-12-1 Well	$ 5.00
___	15.	Application for Test, Expl. Observ. Well	$ 5.00
___	16.	Application for Extension of Time	$ 25.00
___	17.	Proof of Application to Beneficial Use	$ 25.00
___	18.	Notice of Intent to Appropriate	$ 25.00

B. Surface Water Filing Fees

___	1.	Change of Ownership of a Water Right	$ 5.00
___	2.	Declaration of Water Right	$ 10.00
___	3.	Amended Declaration	$ 25.00
___	4.	Application to Change Point of Diversion and Place and/or Purpose of Use from Surface Water to Surface Water	$ 200.00
___	5.	Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Surface Water	$ 200.00
___	6.	Application to Change Point of Diversion	$ 100.00
___	7.	Application to Change Place and/or Purpose of Use	$ 100.00
___	8.	Application to Appropriate	$ 25.00
___	9.	Notice of Intent to Appropriate	$ 25.00
___	10.	Application for Extension of Time	$ 50.00
___	11.	Supplemental Well to a Surface Right	$ 100.00
___	12.	Return Flow Credit	$ 100.00
___	13.	Proof of Completion of Works	$ 25.00
___	14.	Proof of Application of Water to Beneficial Use	$ 25.00
___	15.	Water Development Plan	$ 100.00
___	16.	Declaration of Livestock Water Impoundment	$ 10.00
___	17.	Application for Livestock Water Impoundment	$ 10.00

All fees are non-refundable.

C. Well Driller Fees

___	1.	Application for Well Driller's License	$ 50.00
___	2.	Application for Renewal of Well Driller's License	$ 50.00
___	3.	Application to Amend Well Driller's License	$ 50.00

D. Reproduction of Documents

___ @ 0.25¢ $_____

___ Map(s) @ $3.00 $_____

E. Certification $_____

F. Other $_____

G. Comments:

Mail

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

Mike A. Hamman, P.E.
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

December 1, 2023

Tetra Tech Inc
8977 N Capital Of Texas Hwy 32310
Austin Texas 78759

RE: Well Plugging Plan of Operations for well no. C-4787-POD1

Greetings:

Enclosed is your copy of the Well Plugging Plan of Operations for the above referenced well subject to the attached Conditions of Approval. The proposed method of operation is found to be acceptable and in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted June 30, 2017 by the State Engineer. subject to the attached Conditions of Approval.

Within 30 days after the well is plugged, the well driller is required to file a complete plugging record with the OSE and the permit holder.

Sincerely,

Samantha Davis
Water Resources Professional III

WELL PLUGGING PLAN OF OPERATIONS

NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging. This form may be used to plug a single well, or if you are plugging multiple monitoring wells on the same site using the same plugging methodology.

Alert! Your well may be eligible to participate in the Aquifer Mapping Program (AMP)-NM Bureau of Geology geoinfo.nmt.edu/resources/water/cgmn/ if within an area of interest and meets the minimum construction requirements, such as there is still water in your well, and the well construction reflected in a well record and log is not compromised, contact AMP at 575-835-5038 or -6951, or by email nmbg-waterlevels@nmt.edu, prior to completing this prior form. Showing proof to the OSE that your well was accepted in this program, may delay the plugging of your well until a later date.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP: ☐ Check here if proposing one plan for multiple monitoring wells on the same site and attaching WD-08m

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: C-4787-POD1

Name of well owner: Tetra Tech Inc. on Behalf of ConocoPhillips

Mailing address: 8911 N Capital of Texas Hwy #2310 County:

City: Austin State: Texas Zip code: 78759

Phone number: 512-338-1667 E-mail: Christian.Llull@tetratech.com

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: John Scarborough Drilling Inc.

New Mexico Well Driller License No.: WD1188 Expiration Date: 3/31/2024

IV. WELL INFORMATION: ☐ **Check here if this plan describes method for plugging multiple monitoring wells on the same site and attach supplemental form WD-08m and skip to #2 in this section.**

Note: A copy of the existing Well Record for the well(s) to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: 32.049375° deg, -103.67100: min, _____ sec
Longitude: _____ deg, _____ min, _____ sec, NAD 83

2) Reason(s) for plugging well(s):

Completion of monitoring period

3) Was well used for any type of monitoring program? Yes If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? UNK If yes, provide additional detail, including analytical results and/or laboratory report(s): Unknown

5) Static water level: UNK feet below land surface / feet above land surface (circle one)

6) Depth of the well: 55 feet

7) Inside diameter of innermost casing: 2 inches.

8) Casing material: Sch. 40 PVC

9) The well was constructed with:

☐ an open-hole production interval, state the open interval: _____

☒ a well screen or perforated pipe, state the screened interval(s): 45-55

10) What annular interval surrounding the artesian casing of this well is cement-grouted? _____

11) Was the well built with surface casing? NA If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? NA If yes, please describe:

Temporary Well

12) Has all pumping equipment and associated piping been removed from the well? NA If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING: ☐

If plugging method differs between multiple wells on same site, a separate form must be completed for each method.

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal. Attach a copy of any signed OSE variance to this plugging plan.

Also, if this planned plugging plan requires a variance to 19.27.4 NMAC, attach a detailed variance request signed by the applicant.

1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well:

Tremie Type 1 Cement-Bentonite Slurry from bottom of boring to ground level.

2) Will well head be cut-off below land surface after plugging? NA Temporary

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant. Attach a copy of the batch mix recipe from the cement company and/or product description for specialty cement mixes or any sealant that deviates from the list of OSE approved sealants.

1) For plugging intervals that employ cement grout, complete and attach Table A.

2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.

3) Theoretical volume of grout required to plug the well to land surface: 8.97

4) Type of Cement proposed: Type 1 Cement-Bentonite

5) Proposed cement grout mix: 5 gallons of water per 94 pound sack of Portland cement.

6) Will the grout be: _____ batch-mixed and delivered to the site

x mixed on site

7) Grout additives requested, and percent by dry weight relative to cement:

N/A

8) Additional notes and calculations:

N/A

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

N/A

VIII. SIGNATURE:

I, CHRISTIAN M. LLULL, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Signature of Applicant — Date: 11/13/2023

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

_____ Approved subject to the attached conditions.
_____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 1st day of December, 2023

Mike A. Hamman, P.E., New Mexico State Engineer

By: Samantha Davis
Water Resources Professional III

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)			0
Bottom of proposed interval of grout placement (ft bgl)			2
Theoretical volume of grout required per interval (gallons)			8.97
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement			5
Mixed on-site or batch-mixed and delivered?			on-site
Grout additive 1 requested			
Additive 1 percent by dry weight relative to cement			
Grout additive 2 requested			
Additive 2 percent by dry weight relative to cement			

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)			
Bottom of proposed sealant of grout placement (ft bgl)			
Theoretical volume of sealant required per interval (gallons)			
Proposed abandonment sealant (manufacturer and trade name)			

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623- 8559

Applicant has identified wells, listed below, to be plugged.
John Scarborough Drilling Inc.(WD-1188) will perform the plugging.

Permittee: Tetra Tech on behalf of ConocoPhillips
NMOSE Permit Number: C-4787-POD1

NMOSE File	Casing diameter (inches)	Well depth (feet bgl)	Approximate static water level (feet bgl)	Latitude	Longitude
C-4787-POD1	2 inch	55	Unknown	32.049375°	103.671003°

Specific Plugging Conditions of Approval for Well located in Lea County, New Mexico.

1. Water well drilling and well drilling activities, including well plugging, are regulated under 19.27.4 NMAC, which requires any person engaged in the business of well drilling within New Mexico to obtain a Well Driller License issued by the New Mexico Office of the State Engineer (NMOSE). Therefore, the firm of a New Mexico licensed Well Driller shall perform the well plugging.

2. Theoretical volume of sealant required for abandonment of the 2-inch diameter (I.D.) casing is approximately 8.97 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 55 feet below ground surface (b.g.s.). The Well Plugging Plan of Operation submitted indicates cement grout will be used for the plugging for the interval, at a minimum, from 55-to-0 feet below ground surface.

3. The cement-bentonite slurry (bentonite powder) shall be mixed using a maximum of 5.2 gallons water per 94-lb sack of Type I/II Portland cement **PLUS** 0.65 gallons per 1% increase in bentonite up to a maximum 6% bentonite by dry weight ratio.

4. The bentonite shall be hydrated separately with its required increments of water prior to being mixed into the cement slurry.

5. Placement of the sealant within the wells shall be by pumping through a tremie pipe extended to near well bottom and kept below top of the slurry column as the well is plugged from bottom-upwards in a manner that displaces the standing water column.

6. Should cement "shrinks-back" occur in the well, use of a tremie for topping off is required for cement placement deeper than 20 feet below land surface or if water is present in the casing. The approved sealant for topping off is identified in condition 3. of these Specific Conditions of Approval.

7. Any open annulus encountered surrounding the casing shall also be sealed by the placement of the approved sealant. When plugging shallow wells with no construction or environmental concerns, and if the well record on a well to be plugged shows a proper 20-foot annular seal, a plugging plan can propose the use of clean fill material to a nominal 30 feet bgs, then placing an OSE approved sealant to surface. Lacking that information, we would require an excavation of at least 2-feet which shall then be filled in its entirety with sealant to surface.

8. Should the NMED, or another regulatory agency sharing jurisdiction of the project authorize, or by regulation require a more stringent well plugging procedure than herein acknowledged, the more-stringent procedure should be followed. This, in part, includes provisions regarding pre-authorization to proceed, contaminant remediation, inspection, pulling/perforating of casing, or prohibition of free discharge of any fluid from the borehole during or related to the plugging process.

9. NMOSE witnessing of the plugging of the non-artesian well will not be required.

10. Any deviation from this plan must obtain an approved variance from this office prior to implementation.

11. A Well Plugging Record itemizing actual abandonment process and materials used shall be filed with the State Engineer within 30 days after completion of well plugging. For the plugging record, please resurvey coordinate location for well and note coordinate system for GPS unit. Please attach a copy of these plugging conditions

The NMOSE Well Plugging Plan of Operations is hereby approved with the aforesaid conditions applied.

Witness my hand and seal this 1st day of December 2023

Mike A. Hamman, P.E. State Engineer

By: _____

Samantha Davis
Water Resources Professional III

Chavira, Lisbeth

From: Taylor, Shelly J <sjtaylor@blm.gov>
Sent: Monday, November 13, 2023 1:27 PM
To: Llull, Christian
Cc: Chavira, Lisbeth
Subject: Re: [EXTERNAL] Access Request - Red Hills West State 16 W1 11H Release (nJXK1608134606)

BLM authorizes the installation of a temporary bore to determine DTW.

Sincerely,

Shelly J Taylor
Assistant Field Manager
Lands & Minerals - Acting

Bureau of Land Management
Pecos District/Roswell Field Office
2909 W 2nd St
Roswell, NM 88201

Direct 575.627.0250
Mobile 575.200.0614
sjtaylor@blm.gov

From: Llull, Christian <Christian.Llull@tetratech.com>
Sent: Monday, November 13, 2023 10:26 AM
To: Taylor, Shelly J <sjtaylor@blm.gov>
Cc: Chavira, Lisbeth <LISBETH.CHAVIRA@tetratech.com>
Subject: [EXTERNAL] Access Request - Red Hills West State 16 W1 11H Release (nJXK1608134606)

Shelly,

Tetra Tech is assisting ConocoPhillips with assessment activities associated with an older historical release (occurred on March 12, 2016) on BLM land.

The **Red Hills West State 16 W1 11H Release** was the result of two ruptured gasket seals, approximately 1.6 barrels (bbls) of crude oil and 5 bbls of produced water, of which 1.5 bbls of oil and 4.5 bbls of produced water were recovered. It was an on pad release footprint.

In order to complete the assessment and the submittal process we are requesting verbal approval to install a Depth to water borehole (DTW) off a right of way (ROW) on BLM Land, just to the east of the Pad.
KMZ file attached and screengrab below.

To comply with the New Mexico Office of State Engineer (OSE) permit requirements, we must include landowner approval when submitting the *Application for Permit to Drill* (WR-07).
We have the application ready, we just need your approval.

Please let me know if you require any other permitting or compliance items in addition to this email approval before we begin work.

Red Hills West State 16 W1 11H Release
Unit Letter A, Section 16, Township 26 South, Range 32 East
Lea County, New Mexico
Incident Identification (ID) nJXK1608134606
Approximate Release Location: 32.049410°, -103.672409°
Date Release Discovered: March 12, 2016
Volume Released: Approximately 1.6 barrels (bbls) of crude oil and 5 bbls of produced water were released.
Release on Pad

Christian Llull, P.G. | Program Manager
Mobile **+1 (512) 565-0190** | christian.llull@tetratech.com

Tetra Tech | *Leading with Science*® | OGA
8911 N. Capital of Texas Highway | Bldg. 2, Suite 2310 | Austin, TX 78759 | tetratech.com

Chavira, Lisbeth

From: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Sent: Monday, December 4, 2023 10:32 AM
To: Chavira, Lisbeth
Cc: Llull, Christian; Abbott, Sam
Subject: RE: [EXTERNAL] Extension Request - Application ID 201345 (nTO1431831520)

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

Lisbeth,
The extension request for **nTO1431831520** is approved. The new due date is January 30, 2024.

Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Brittany Hall • Environmental Specialist
Environmental Bureau Projects Group
EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87110
505.517.5333 | Brittany.Hall@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd/

From: Chavira, Lisbeth <LISBETH.CHAVIRA@tetratech.com>
Sent: Friday, December 1, 2023 3:14 PM
To: Hall, Brittany, EMNRD <Brittany.Hall@emnrd.nm.gov>
Cc: Llull, Christian <Christian.Llull@tetratech.com>; Abbott, Sam <Sam.Abbott@tetratech.com>
Subject: [EXTERNAL] Extension Request - Application ID 201345 (nTO1431831520)

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

Ms. Hall,

On behalf of ConocoPhillips, Tetra Tech is requesting an additional 60-day extension (until January 30, 2024) to complete reporting for the for the Red Hills West 16 State TC No.012H Release site (**nTO1431831520**). A previous extension request was approved on September 22, 2023 for December 1, 2023.

A Closure Letter Report dated June 1, 2020, was rejected by the OCD on 3/28/2023 with the following comments:

"Confirmation samples were not collected per 19.15.29 NMAC. 1RP-3424 closed. Refer to incident #NTO1431831520 in all future communication. Submit a complete report through the OCD Permitting website by 6/28/2023."

The OCD, ConocoPhillips, and Tetra Tech had a meeting on September 20, 2023, to discuss the OCD rejections of a select number of submitted closure reports associated with the Agreed Compliance Order (ACO) for open release incidents between ConocoPhillips and OCD. In this meeting, ConocoPhillips and Tetra Tech received clarification from the OCD on the closure requirements for the historical releases.

Based on this meeting and a desktop review of the incident, Tetra Tech conducted assessment sampling activities at the Red Hills West 16 State TC No.012H.

- Assessment and delineation activities were conducted on October 11, 2023.
- Tetra Tech installed five (5) hand auger borings within and around the approximate release extent.
- 5 Samples were collected and submitted to Cardinal to be analyzed for chloride via EPA Method 300.0, TPH via EPA Method 8015M, and BTEX via EPA Method 8261B.
- The collected data is presents in Table 1 attached.
- The boring locations are provided in the attached figure.
- Neither horizontal delineation nor vertical delineation was able to be achieved. The pad conditions led to shallow auger refusal.
- Tetra Tech will be re-mobilizing to the site to complete delineation (via trenching) the week of December 4th.

In addition, to adequately determine depth to groundwater, ConocoPhillips is planning to install a depth to groundwater boring. An *Application for Permit to Drill* was submitted to the Office of State Engineer dated November 13, 2023, for the installation of the DTW boring. The BLM has granted approved to drill the DTW, however, as of today, Tetra Tech has not received the OSE permit and is awaiting a response from the OSE before scheduling the drilling.

Therefore, additional time is required to perform additional assessment sampling, complete site characterization, and prepare a revised report for OCD review.
A complete report will be submitted to the OCD within the requested timeframe.

Thank you in advance.

Lisbeth Chavira | Staff Geoscientist
Direct Mobile **+1 (512) 596-8201** | Lisbeth.chavira@tetratech.com

Tetra Tech | *Leading with Science®* | OGA
8911 N. Capital of Texas Highway | Bldg. 2, Suite 2310 | Austin, TX 78759 | tetratech.com

Chavira, Lisbeth

From: Llull, Christian
Sent: Thursday, December 7, 2023 4:17 PM
To: Chavira, Lisbeth
Subject: FW: The Oil Conservation Division (OCD) has accepted the application, Application ID: 292466

Christian

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Thursday, December 07, 2023 4:16 PM
To: Llull, Christian <Christian.Llull@tetratech.com>
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 292466

To whom it may concern (c/o Christian Llull for CONOCOPHILLIPS COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nTO1431831520.

The sampling event is expected to take place:

When: 12/13/2023 @ 10:15
Where: A-16-26S-32E 349 FNL 330 FEL (32.0493546,-103.6723938)

Additional Information: Red Hills West 16 State TC 12H Release
ConocoPhillips
Lea County, New Mexico
DOR: 11/5/2014
INCIDENT ID: nTO1431831520
Approximate Release Point: 32.04935°, -103.67239

Additional Instructions: Approximate Release Point: 32.04935°, -103.67239

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

Chavira, Lisbeth

From: OCDOnline@state.nm.us
Sent: Friday, February 2, 2024 9:53 AM
To: Llull, Christian
Subject: The Oil Conservation Division (OCD) has rejected the application, Application ID: 308436

To whom it may concern (c/o Christian Llull for CONOCOPHILLIPS COMPANY),

The OCD has rejected the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nTO1431831520,
for the following reasons:

- **Closure denied. Horizontal delineation must meet the requirements of the reclamation standards 19.15.29.13 NMAC (600 mg/kg Cl, 100 mg/kg TPH, 50 mg/kg BTEX, 10 mg/kg benzene) or OCD approved "background" values for the upper 4 feet of the impacted area. Confirmation soil samples must consist of five-point composite samples from the side wall and base and individual grab samples from any wet or discolored areas, representing a surface area of no more than 200 ft2 unless otherwise approved. Submit a report via the OCD permitting portal by 06/07/2024.**

The rejected C-141 can be found in the OCD Online: Permitting - Action Status, under the Application ID: 308436.
Please review and make the required correction(s) prior to resubmitting.
If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional C-141.

Thank you,
Ashley Maxwell
Projects Environmental Specialist - A
505-635-5000
Ashley.Maxwell@emnrd.nm.gov

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

Chavira, Lisbeth

From: OCDOnline@state.nm.us
Sent: Wednesday, March 6, 2024 2:49 PM
To: Llull, Christian
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 320878

To whom it may concern (c/o Christian Llull for CONOCOPHILLIPS COMPANY),

The OCD has received the submitted *Notification for (Final) Sampling of a Release* (C-141N), for incident ID (n#) nAB1431639646.

The sampling event is expected to take place:

When: 03/11/2024 @ 10:00
Where: E-34-26S-31E Lot: 4 250 FSL 380 FWL (32.0008698,-103.7733765)

Additional Information: Call Lisbeth at 512-596-8201

Additional Instructions: Approximate Release Point 32.000917°, -103.773324°

An OCD representative may be available onsite at the date and time reported. In the absence or presence of an OCD representative, sampling pursuant to 19.15.29.12.D NMAC is required. Sampling must be performed following an approved sampling plan or pursuant to 19.15.29.12.D.(1).(c) NMAC. Should there be a change in the scheduled date and time of the sampling event, then another notification should be resubmitted through OCD permitting as soon as possible.

- **Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.**

If you have any questions regarding this application, or don't know why you have received this email, please contact us.

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

APPENDIX C
Site Characterization Data

212C-MD-03246 | TETRA TECH | **LOG OF BORING Red Hills West State DTW** | Page 1 of 1

Project Name: Red Hills West State 16 W1 12H

Borehole Location: GPS Coordinates: 32.049398°, -103.671311° | Surface Elevation: 3226 ft

Borehole Number: Red Hills West State DTW | Borehole Diameter (in.): 8 | Date Started: | Date Finished: 1/8/2024

WATER LEVEL OBSERVATIONS

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

Remarks:

DEPTH (ft)	OPERATION TYPE	SAMPLE	CHLORIDE FIELD SCREENING (ppm) ExStik	VOC FIELD SCREENING (ppm) PID	SAMPLE RECOVERY (%)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT LL	PLASTICITY INDEX PI	MINUS NO. 200 (%)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	REMARKS
0												**-SP-** SAND: Brown, loose, dry, fine- to coarse-grained, with abundant sub-angular to sub-rounded caliche	2	
5												**-GP-** CALICHE GRAVEL: Brown, loose, dry, fine- to coarse-grained, abundant sub-angular to sub-rounded caliche fragments	6	
10												**-GP-** CALICHE GRAVEL: Brown, loose, dry, fine- to coarse-grained, with fine-grained tan sand	14	
15												**-GP-** CALICHE GRAVEL: Brown, loose, dry, fine- to coarse-grained, with coarse-grained pale brown sand	19	
20												**-SP-** SAND: Pale brown to light brown, loose, dry, fine-grained, with gravel-sized caliche fragments	24	
25												**-SM-** SAND: Light brown, loose, dry, fine-grained, with pea gravel-sized caliche fragments	39	
30												**-SP-** SAND: Light brown, loose, dry, fine-grained, with gravel-sized caliche fragments	44	
35												**-SP-** SAND: Light brown, loose, dry, fine-grained, with pea gravel-sized caliche fragments	57	
40														
45														
50														
55														

Bottom of borehole at 57.0 feet.

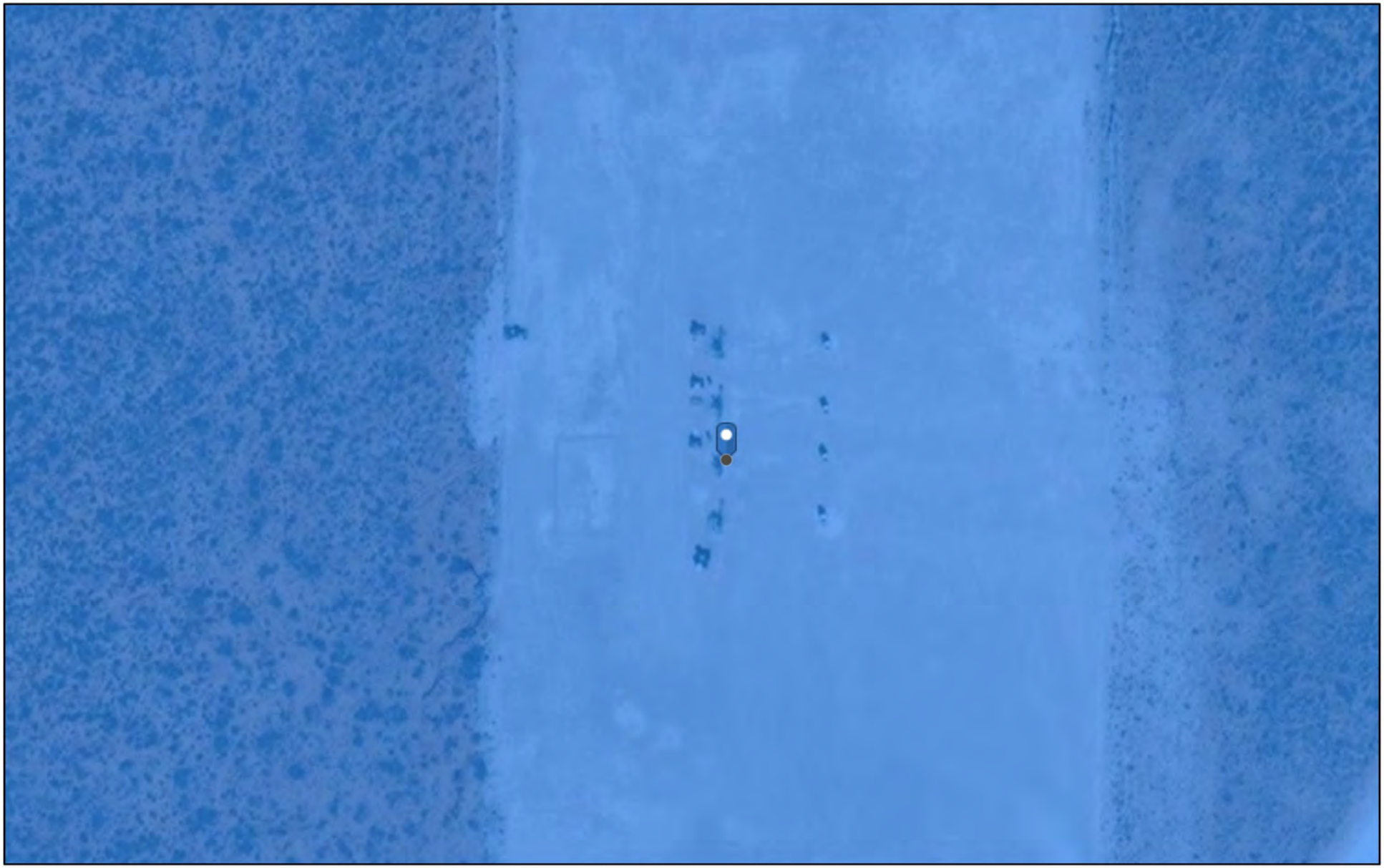
Sampler Types: Split Spoon, Acetate Liner, Shelby, Vane Shear, Bulk Sample, Discrete Sample, Grab Sample, Test Pit

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

Notes:
Surface elevation is an approximate value obtained from Google Earth data.

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

OCD Karst Areas



10/11/2023, 10:29:15 AM

Karst Occurrence Potential

Medium

1:1,128

0 0.01 0.01 0.03 mi

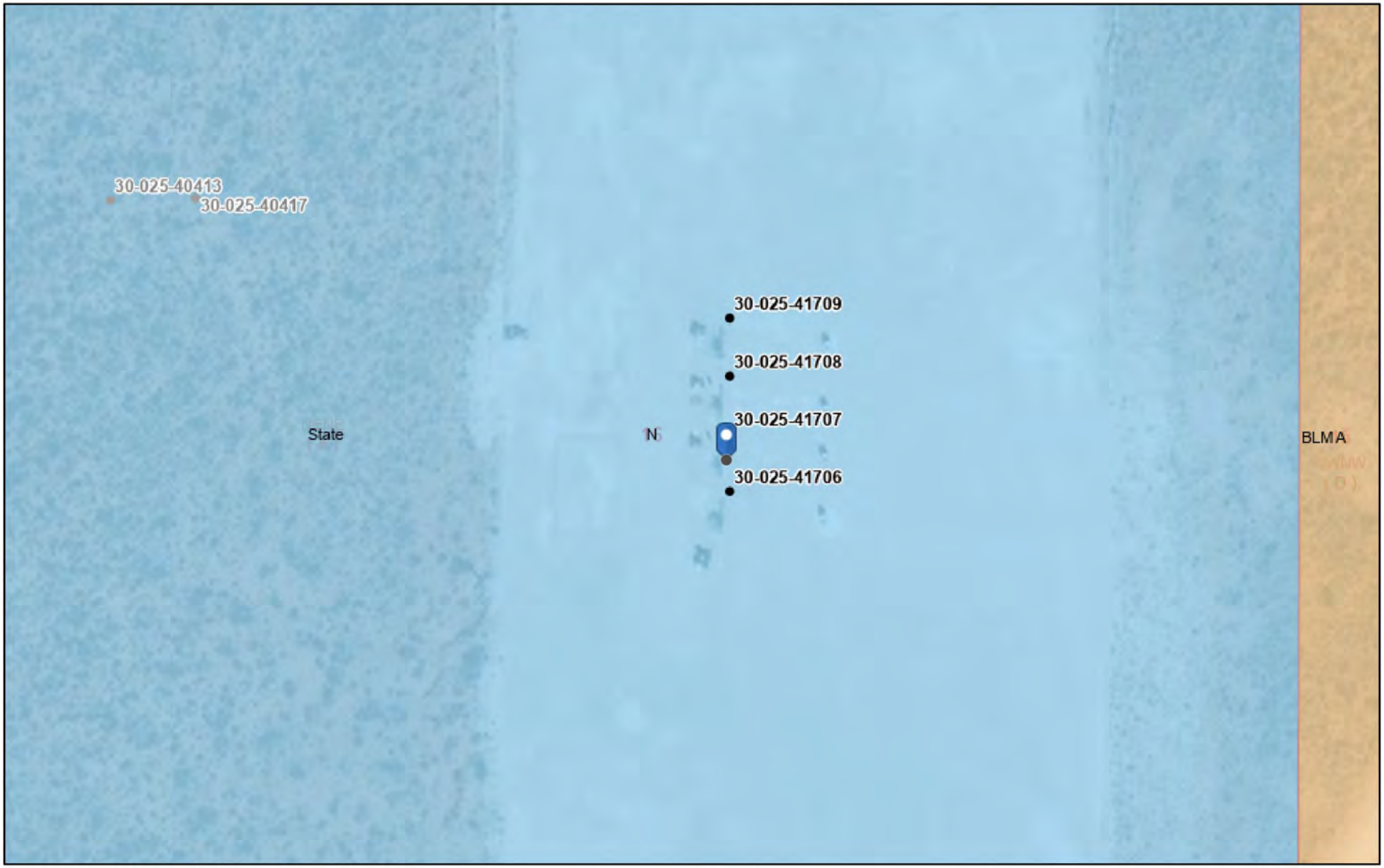
0 0.01 0.03 0.05 km

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

New Mexico Oil Conservation Division

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

OCD Land Ownership



10/11/2023, 10:23:26 AM

Wells - Large Scale
- Oil, Active
- Oil, Cancelled

Land Ownership
- BLM
- S

Mineral Ownership
- A-All minerals are owned by U.S.
- N-No minerals are owned by the U.S.

1:1,128

0 0.01 0.01 0.03 mi

0 0.01 0.03 0.05 km

U.S. BLM, Maxar, Microsoft, Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department., OCD, Esri, HERE,

New Mexico Oil Conservation Division

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

National Flood Hazard Layer FIRMette

FEMA

103°40'39"W 32°3'13"N

103°40'2"W 32°2'43"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/11/2023 at 10:00 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

OCD Waterbodies

10/11/2023, 10:41:53 AM

OSE Streams

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Esri, HERE, Garmin, iPC, Maxar, NM OSE

New Mexico Oil Conservation Division

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

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 03595 POD1	4	2	3	21	26S	32E	624423	3544045

Driller License: 1654 **Driller Company:** NOT WORKING FOR HIRE--SIRMAN DRILLING AND CONSTRUC

Driller Name:

Drill Start Date: 09/30/2013 **Drill Finish Date:** 09/30/2013 **Plug Date:**

Log File Date: 10/29/2013 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

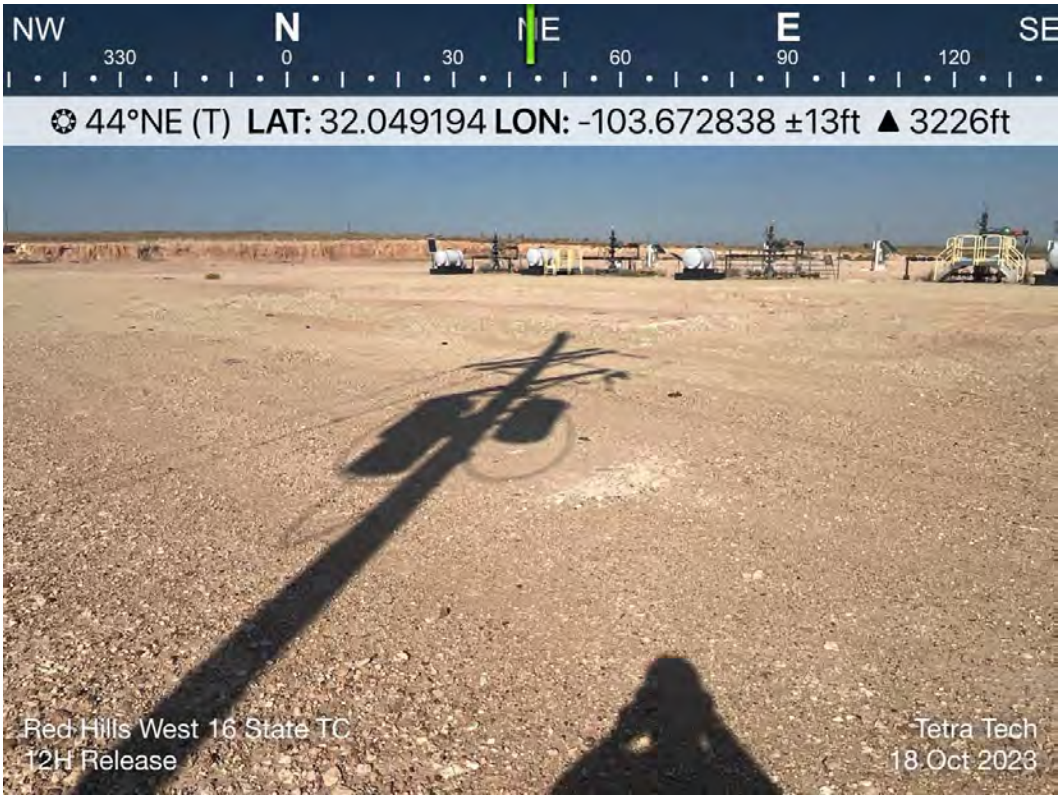
Casing Size: 6.00 **Depth Well:** 280 feet **Depth Water:** 180 feet

Water Bearing Stratifications:	Top	Bottom	Description
	160	200	Sandstone/Gravel/Conglomerate

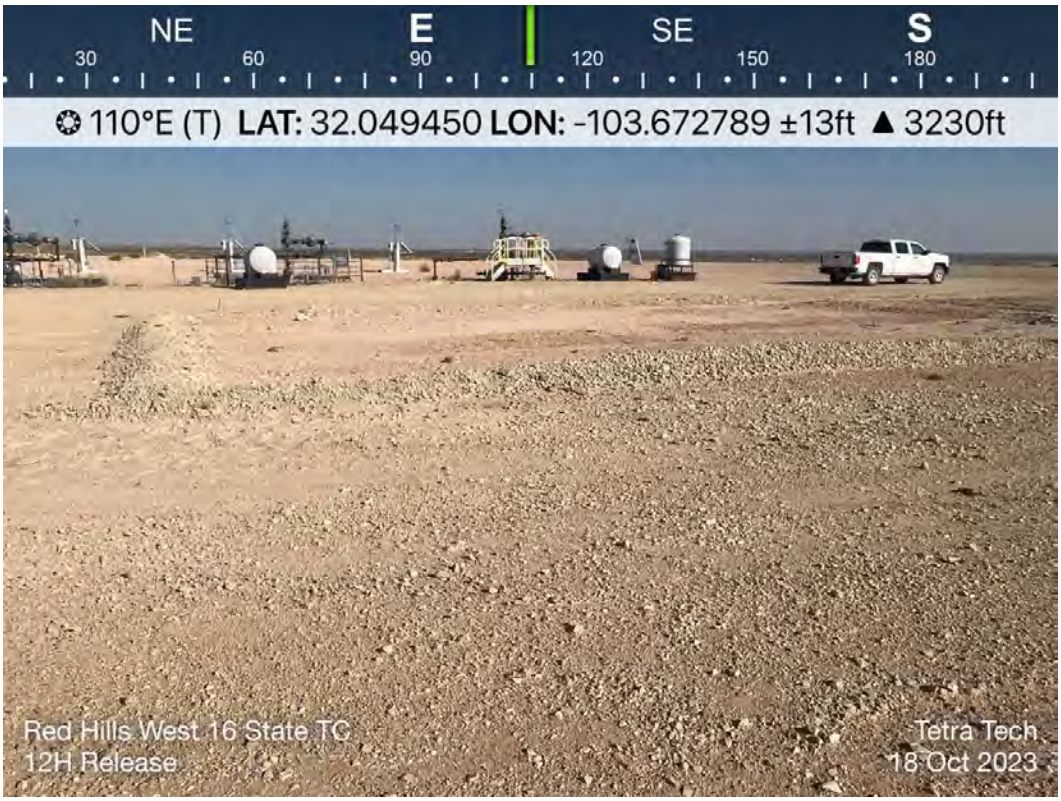
Casing Perforations:	Top	Bottom
	200	240

APPENDIX D
Photographic Documentation

TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View north of Site assessment activities. Approximate release area.	1
	SITE NAME	RED HILLS WEST STATE 16 W1 12H Release	10/18/2023



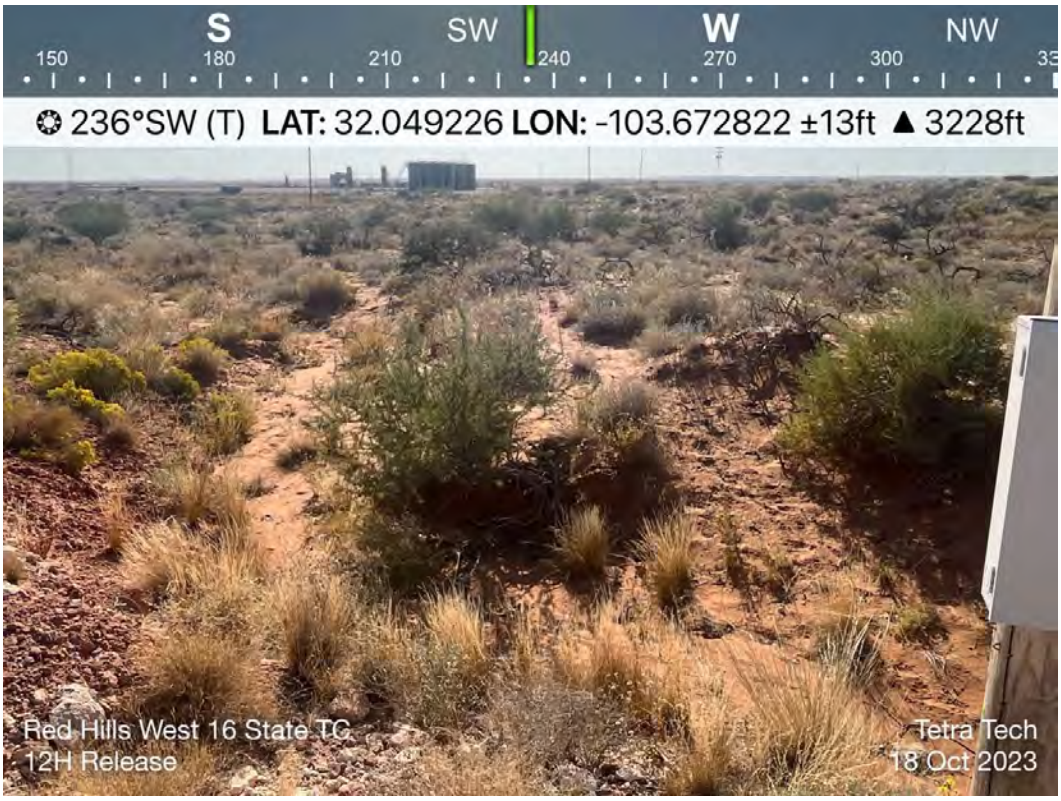
TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View northeast of Site assessment activities. Approximate release area.	2
	SITE NAME	RED HILLS WEST STATE 16 W1 12H Release	10/18/2023



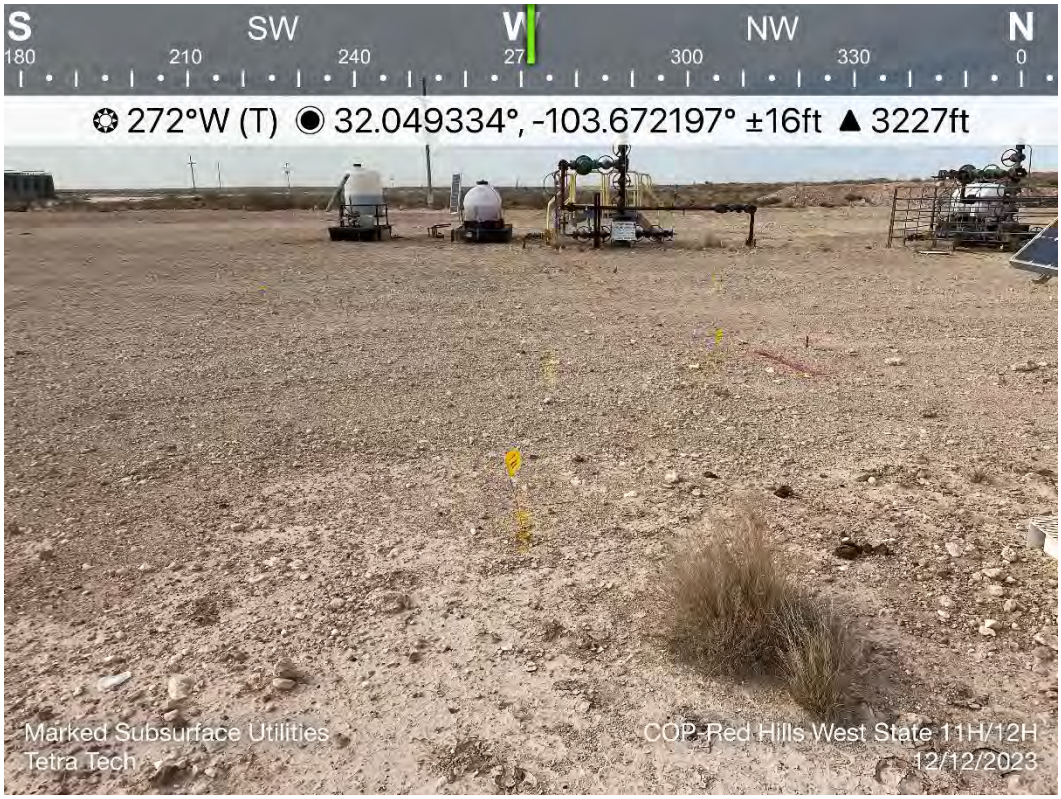
TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View east-southeast of Site assessment activities. Approximate release area.	3
	SITE NAME	RED HILLS WEST STATE 16 W1 12H Release	10/18/2023

TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View south-southwest of Site assessment activities. Approximate release area.	4
	SITE NAME	RED HILLS WEST STATE 16 W1 12H Release	10/18/2023

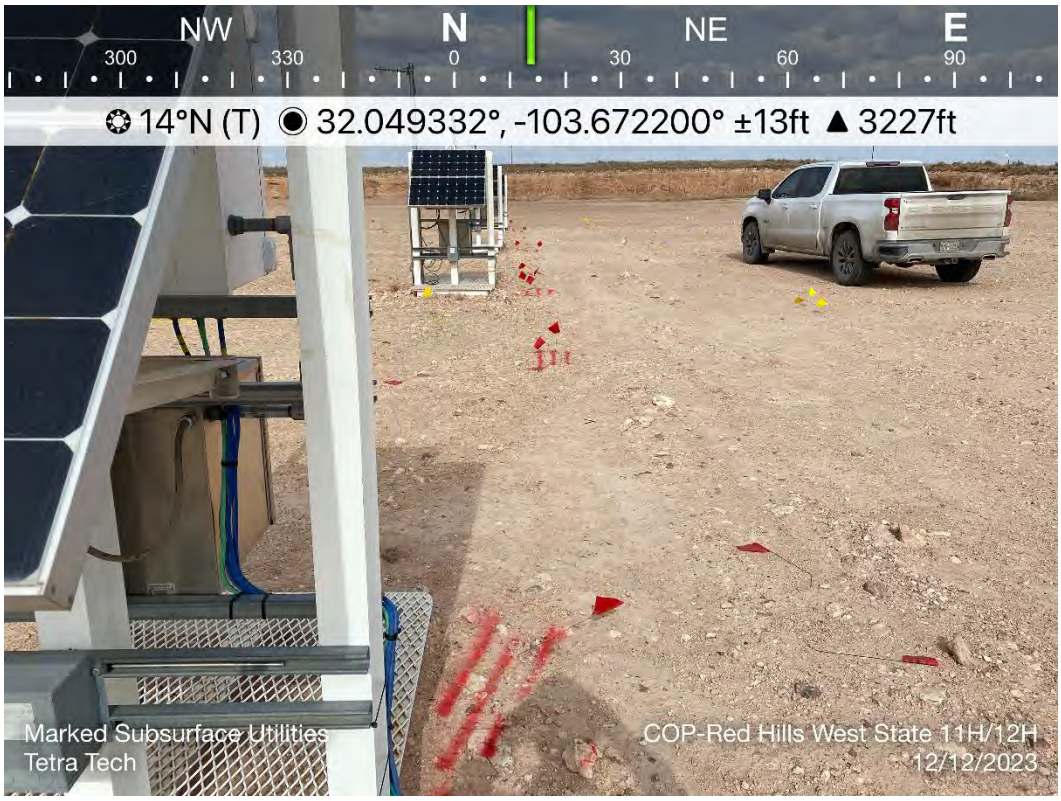
TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View south-southwest of Site assessment activities. Approximate release area.	5
	SITE NAME	RED HILLS WEST STATE 16 W1 12H Release	10/18/2023



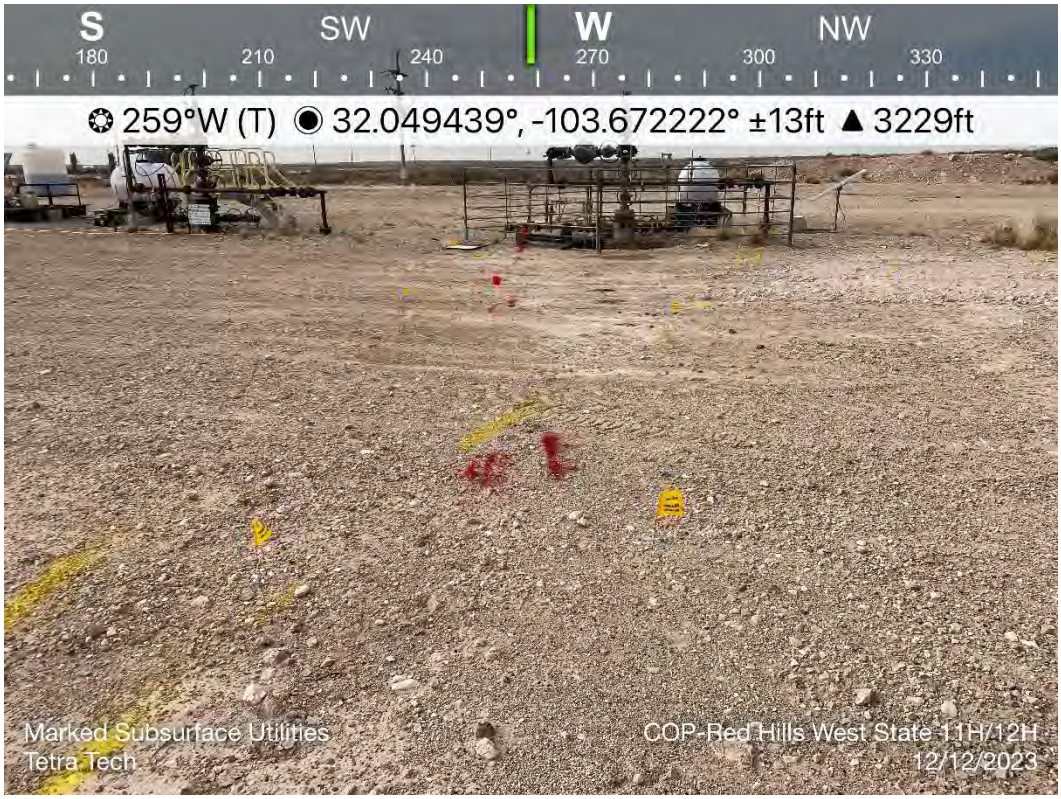
TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View southwest of Site assessment activities. Approximate release area.	6
	SITE NAME	RED HILLS WEST STATE 16 W1 12H Release	10/18/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View west of approximate release area and marked subsurface utilities.	6
	SITE NAME	RED HILLS WEST 16 STATE W1 12H Release	12/12/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View north-northeast of approximate release area and marked subsurface utilities.	7
	SITE NAME	RED HILLS WEST 16 STATE W1 12H Release	12/12/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View west of approximate release area and marked subsurface utilities.	8
	SITE NAME	RED HILLS WEST 16 STATE W1 12H Release	12/12/2023

TETRA TECH, INC. PROJECT NO. 212C-MD-03246	DESCRIPTION	View east-southeast of approximate release area and marked subsurface utilities.	9
	SITE NAME	RED HILLS WEST 16 STATE W1 12H Release	12/12/2023

APPENDIX E
Laboratory Analytical Data

CARDINAL Laboratories

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

March 06, 2024

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: RED HILLS WEST 16 STATE TC #12H RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 02/29/24 10:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 1 (H241003-01)

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	03/01/2024	ND	2.30	115	2.00	0.400	
Toluene*	<0.050	0.050	03/01/2024	ND	2.25	112	2.00	0.197	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.22	111	2.00	0.310	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.40	107	6.00	0.308	
Total BTEX	<0.300	0.300	03/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.6 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**960**	16.0	03/01/2024	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	02/29/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**2910**	10.0	02/29/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**1530**	10.0	02/29/2024	ND					

Surrogate: 1-Chlorooctane *74.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *127 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 2 (H241003-02)

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	03/01/2024	ND	2.30	115	2.00	0.400	
Toluene*	<0.050	0.050	03/01/2024	ND	2.25	112	2.00	0.197	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.22	111	2.00	0.310	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.40	107	6.00	0.308	
Total BTEX	<0.300	0.300	03/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.1 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2400**	16.0	03/01/2024	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	02/29/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**1760**	10.0	02/29/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**782**	10.0	02/29/2024	ND					

Surrogate: 1-Chlorooctane *70.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *89.3 %* *49.1-148*

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

Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 3 (H241003-03)

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	03/01/2024	ND	2.30	115	2.00	0.400	
Toluene*	<0.050	0.050	03/01/2024	ND	2.25	112	2.00	0.197	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.22	111	2.00	0.310	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.40	107	6.00	0.308	
Total BTEX	<0.300	0.300	03/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.7 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**480**	16.0	03/01/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**3440**	10.0	02/29/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**1880**	10.0	02/29/2024	ND					

Surrogate: 1-Chlorooctane *77.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *222 %* *49.1-148*

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Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 4 (H241003-04)

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	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2400**	16.0	03/01/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**7310**	10.0	02/29/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**3010**	10.0	02/29/2024	ND					

Surrogate: 1-Chlorooctane *79.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *212 %* *49.1-148*

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Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 5 (H241003-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1410**	16.0	03/01/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**5670**	10.0	02/29/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**2580**	10.0	02/29/2024	ND					

Surrogate: 1-Chlorooctane *85.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *185 %* *49.1-148*

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Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 6 (H241003-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**992**	16.0	03/01/2024	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	02/29/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**2780**	10.0	02/29/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**1450**	10.0	02/29/2024	ND					

Surrogate: 1-Chlorooctane *77.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *113 %* *49.1-148*

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Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 7 (H241003-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1100**	16.0	03/01/2024	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/29/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**4700**	10.0	02/29/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**2070**	10.0	02/29/2024	ND					

Surrogate: 1-Chlorooctane *81.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *169 %* *49.1-148*

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CARDINAL Laboratories

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Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 8 (H241003-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5840**	16.0	03/01/2024	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	02/29/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**546**	10.0	02/29/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**284**	10.0	02/29/2024	ND					

Surrogate: 1-Chlorooctane *71.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *78.3 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 9 (H241003-09)

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	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3520**	16.0	03/01/2024	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	02/29/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**299**	10.0	02/29/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**176**	10.0	02/29/2024	ND					

Surrogate: 1-Chlorooctane *77.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *49.1-148*

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Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 10 (H241003-10)

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	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1740**	16.0	03/01/2024	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	03/01/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**1980**	10.0	03/01/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**1090**	10.0	03/01/2024	ND					

Surrogate: 1-Chlorooctane *63.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *145 %* *49.1-148*

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Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 11 (H241003-11)

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	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1120**	16.0	03/01/2024	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	03/05/2024	ND	215	107	200	4.42	
DRO >C10-C28*	<10.0	10.0	03/05/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	<10.0	10.0	03/05/2024	ND					

Surrogate: 1-Chlorooctane *71.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *67.1 %* *49.1-148*

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Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 12 (H241003-12)

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	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3840**	16.0	03/01/2024	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	03/01/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**344**	10.0	03/01/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**182**	10.0	03/01/2024	ND					

Surrogate: 1-Chlorooctane *70.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *102 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 13 (H241003-13)

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	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2320**	16.0	03/01/2024	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	03/01/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**750**	10.0	03/01/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	**415**	10.0	03/01/2024	ND					

Surrogate: 1-Chlorooctane *58.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 14 (H241003-14)

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	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2320**	16.0	03/01/2024	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	03/05/2024	ND	215	107	200	4.42	
DRO >C10-C28*	**11.8**	10.0	03/05/2024	ND	206	103	200	5.00	
EXT DRO >C28-C36	<10.0	10.0	03/05/2024	ND					

Surrogate: 1-Chlorooctane *80.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *76.8 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 15 (H241003-15)

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	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	03/01/2024	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	03/01/2024	ND	197	98.6	200	6.48	
DRO >C10-C28*	<10.0	10.0	03/01/2024	ND	194	96.8	200	7.74	
EXT DRO >C28-C36	<10.0	10.0	03/01/2024	ND					

Surrogate: 1-Chlorooctane *72.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *66.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/29/2024	Sampling Date:	02/27/2024
Reported:	03/06/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03245	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: CS - 16 (H241003-16)

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	03/01/2024	ND	2.06	103	2.00	2.11	
Toluene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	2.94	
Ethylbenzene*	<0.050	0.050	03/01/2024	ND	2.10	105	2.00	3.00	
Total Xylenes*	<0.150	0.150	03/01/2024	ND	6.30	105	6.00	3.09	
Total BTEX	<0.300	0.300	03/01/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**640**	16.0	03/01/2024	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	03/01/2024	ND	197	98.6	200	6.48	
DRO >C10-C28*	<10.0	10.0	03/01/2024	ND	194	96.8	200	7.74	
EXT DRO >C28-C36	<10.0	10.0	03/01/2024	ND					

Surrogate: 1-Chlorooctane *76.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *70.1 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Tetra Tech		**BILL TO**	
Project Manager: Christian Llull		P.O. #:	
Address: 8911 Capital o Texas Hwy, Suite 2310		Company: Tetra Tech	
City: Austin	State: TX Zip:	Attn: Christian Llul	
Phone #: (512)565-0190	Fax #:	Address: EMAIL	
Project #: 212C-MD-03245	Project Owner: ConocoPhillips	City:	
Project Name: Red Hills West 16 State TC #12H Release		State: Zip:	
Project Location: Lea County, New Mexico		Phone #:	
Sampler Name: Colton Bickerstaff		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH 8015M	BTEX 8021B	Chloride SM4500CI-B
H241003																	
1	CS-1	C	1			X					X		2/27/2024		X	X	X
2	CS-2	C	1			X					X		2/27/2024		X	X	X
3	CS-3	C	1			X					X		2/27/2024		X	X	X
4	CS-4	C	1			X					X		2/27/2024		X	X	X
5	CS-5	C	1			X					X		2/27/2024		X	X	X
6	CS-6	C	1			X					X		2/27/2024		X	X	X
7	CS-7	C	1			X					X		2/27/2024		X	X	X
8	CS-8	C	1			X					X		2/27/2024		X	X	X
9	CS-9	C	1			X					X		2/27/2024		X	X	X
10	CS-10	C	1			X					X		2/27/2024		X	X	X

ANALYSIS REQUEST

Relinquished By: Colton Bickerstaff	Date: 2/29/24 Time: 1050	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address: Christian.Llull@tetratech.com
Relinquished By:	Date: Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C Corrected Temp. °C 1.9	Sample Condition Cool Intact ☑ Yes ☐ Yes ☐ No ☐ No	CHECKED BY: (Initials) SK

Turnaround Time: Standard ✱ Bacteria (only) Sample Condition
Rush: N/A ☐ Cool Intact Observed Temp. °C
Thermometer ID ~~#113~~ #140
Correction Factor ~~-0.5°C~~ ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Tetra Tech	
Project Manager: Christian Llull	
Address: 8911 Capital o Texas Hwy, Suite 2310	
City: Austin State: TX Zip:	
Phone #: (512)565-0190 Fax #:	
Project #: 212C-MD-03245 Project Owner: ConocoPhillips	
Project Name: Red Hills West 16 State TC #12H Release	
Project Location: Lea County, New Mexico	
Sampler Name: Colton Bickerstaff	

BILL TO

P.O. #:
Company: Tetra Tech
Attn: Christian Llul
Address: EMAIL
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH 8015M	BTEX 8021B	Chloride SM4500CI-B
H241003																	
11	CS-11	C	1			X					X		2/27/2024		X	X	X
12	CS-12	C	1			X					X		2/27/2024		X	X	X
13	CS-13	C	1			X					X		2/27/2024		X	X	X
14	CS-14	C	1			X					X		2/27/2024		X	X	X
15	CS-15	C	1			X					X		2/27/2024		X	X	X
16	CS-16	C	1			X					X		2/27/2024		X	X	X

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

Relinquished By: Colton Bickerstaff	Date: 2/29/24 Time: 1050	Received By: S Rodriguez	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address: Christian.Llull@tetratech.com
Relinquished By:	Date: Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 1.9 Corrected Temp. °C	Sample Condition Cool: Yes Intact: Yes / No No	CHECKED BY: (Initials) SR

Turnaround Time: Standard ✱ Bacteria (only) Sample Condition
Rush: N/A ☐ Cool Intact Observed Temp. °C
Thermometer ID #113
Correction Factor -0.5°C #140
☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

March 18, 2024

LISBETH CHAVIRA

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: RED HILLS WEST 16 STATE TC #12H RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 03/12/24 16:43.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 3 (0' - 1') (H241269-01)

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	03/14/2024	ND	2.01	101	2.00	1.66	
Toluene*	<0.050	0.050	03/14/2024	ND	2.01	101	2.00	1.54	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.97	98.6	2.00	1.16	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.90	98.4	6.00	1.24	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**640**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	**2090**	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	**333**	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *93.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *90.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 3 (2' - 3') (H241269-02)

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	03/14/2024	ND	2.01	101	2.00	1.66	
Toluene*	<0.050	0.050	03/14/2024	ND	2.01	101	2.00	1.54	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.97	98.6	2.00	1.16	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.90	98.4	6.00	1.24	
Total BTEX	<0.300	0.300	03/14/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**640**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	**73.8**	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	<10.0	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *96.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 3 (3' - 4') (H241269-03)

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	03/14/2024	ND	2.01	101	2.00	1.66	
Toluene*	<0.050	0.050	03/14/2024	ND	2.01	101	2.00	1.54	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.97	98.6	2.00	1.16	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.90	98.4	6.00	1.24	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**960**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	<10.0	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	<10.0	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *86.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 3 (5' - 6') (H241269-04)

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	03/14/2024	ND	1.70	84.9	2.00	19.3	
Toluene*	<0.050	0.050	03/14/2024	ND	1.84	92.2	2.00	19.7	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.91	95.5	2.00	20.1	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.69	94.9	6.00	19.9	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	<10.0	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	<10.0	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *93.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.3 %* *49.1-148*

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Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 4 (0' - 1') (H241269-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/14/2024	ND	1.70	84.9	2.00	19.3	
Toluene*	<0.050	0.050	03/14/2024	ND	1.84	92.2	2.00	19.7	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.91	95.5	2.00	20.1	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.69	94.9	6.00	19.9	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *116 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	<10.0	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	<10.0	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *98.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.5 %* *49.1-148*

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Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 4 (2' - 3') (H241269-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/14/2024	ND	1.70	84.9	2.00	19.3	
Toluene*	<0.050	0.050	03/14/2024	ND	1.84	92.2	2.00	19.7	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.91	95.5	2.00	20.1	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.69	94.9	6.00	19.9	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	**18.1**	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	<10.0	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *91.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.1 %* *49.1-148*

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Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 4 (3' - 4') (H241269-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/14/2024	ND	1.70	84.9	2.00	19.3	
Toluene*	<0.050	0.050	03/14/2024	ND	1.84	92.2	2.00	19.7	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.91	95.5	2.00	20.1	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.69	94.9	6.00	19.9	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	**41.7**	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	<10.0	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *87.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.7 %* *49.1-148*

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Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 4 (5' - 6') (H241269-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/14/2024	ND	1.70	84.9	2.00	19.3	
Toluene*	<0.050	0.050	03/14/2024	ND	1.84	92.2	2.00	19.7	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.91	95.5	2.00	20.1	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.69	94.9	6.00	19.9	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**592**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	<10.0	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	<10.0	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *91.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.2 %* *49.1-148*

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CARDINAL Laboratories

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Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 5 (0' - 1') (H241269-09)

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	03/14/2024	ND	1.70	84.9	2.00	19.3	
Toluene*	<0.050	0.050	03/14/2024	ND	1.84	92.2	2.00	19.7	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.91	95.5	2.00	20.1	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.69	94.9	6.00	19.9	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *117 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	**342**	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	**23.7**	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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CARDINAL Laboratories

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

Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 5 (2' - 3') (H241269-10)

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	03/14/2024	ND	1.70	84.9	2.00	19.3	
Toluene*	<0.050	0.050	03/14/2024	ND	1.84	92.2	2.00	19.7	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.91	95.5	2.00	20.1	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.69	94.9	6.00	19.9	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *115 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	**314**	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	**24.5**	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *98.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

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Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 5 (3' - 4') (H241269-11)

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	03/14/2024	ND	1.70	84.9	2.00	19.3	
Toluene*	<0.050	0.050	03/14/2024	ND	1.84	92.2	2.00	19.7	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.91	95.5	2.00	20.1	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.69	94.9	6.00	19.9	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	**273**	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	**13.8**	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *98.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

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Analytical Results For:

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

Received:	03/12/2024	Sampling Date:	03/12/2024
Reported:	03/18/2024	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Dionica Hinojos
Project Location:	LEA COUNTY, NM		

Sample ID: T - 5 (5' - 6') (H241269-12)

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	03/14/2024	ND	1.70	84.9	2.00	19.3	
Toluene*	<0.050	0.050	03/14/2024	ND	1.84	92.2	2.00	19.7	
Ethylbenzene*	<0.050	0.050	03/14/2024	ND	1.91	95.5	2.00	20.1	
Total Xylenes*	<0.150	0.150	03/14/2024	ND	5.69	94.9	6.00	19.9	
Total BTEX	<0.300	0.300	03/14/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	03/14/2024	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	03/14/2024	ND	200	99.8	200	0.905	
DRO >C10-C28*	<10.0	10.0	03/14/2024	ND	205	103	200	0.652	
EXT DRO >C28-C36	<10.0	10.0	03/14/2024	ND					

Surrogate: 1-Chlorooctane *106 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.7 %* *49.1-148*

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Notes and Definitions

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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

page 1 of 2

Company Name:	ConocoPhillips
Project Manager:	Lisbeth Chavira
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	212C-MD-03246 Project Owner:
Project Name:	Red Hills West 16 State TC 12H Release
Project Location:	Lea Co, NM
Sampler Name:	Andrew Garcia

BILL TO

P.O. #:	
Company:	Tetra Tech
Attn:	Lisbeth Chavira
Address:	
City:	
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	TPH	BTEX	Chlorides
H241269													2024				
1	T-3 (0'-1')	G	1			X					X		3/12	0800	X	X	X
2	T-3 (2'-3')													0830			
3	T-3 (3'-4')													0900			
4	T-3 (5'-6')													0930			
5	T-4 (0'-1')													1000			
6	T-4 (2'-3')													1030			
7	T-4 (3'-4')													1100			
8	T-4 (5'-6')													1130			
9	T-5 (0'-1')													1200			
10	T-5 (2'-3')													1230			

Relinquished By:	Date: Mar 12, 24	Received By:	
Andrew Garcia	Time: 1643		
Relinquished By:	Date:	Received By:	
	Time:		

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
Lisbeth.Chavira@tetratech.com
REMARKS:
Nicholas.Poole@tetratech.com

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Observed Temp. °C 3.0°C
Corrected Temp. °C #140

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials) AA

Turnaround Time: Standard ☒ Rush ☐
Thermometer ID #140
Correction Factor 0°C

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

FORM-006 R 3.4 07/11/23

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

page 2 of 2

Company Name:	Conoco Phillips
Project Manager:	Lisbeth Chavira
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	212C-MD-03246 Project Owner:
Project Name:	Red Hills West 16 State TC 12H Release
Project Location:	Lea Co, NM
Sampler Name:	Andrew Garcia

BILL TO

P.O. #:	
Company:	Tetra Tech
Attn:	Lisbeth Chavira
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	(ICE) COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	TPH	BTEX	Chlorides
H241269													2024				
11	T-5 (3'-4')	G	1			X					X		3/12	1300	X	X	X
12	T-5 (5'-6')	↓	↓			↓					↓		↓	1330	↓	↓	↓

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

Relinquished By:	Date: Mar 12, 24	Received By:	
Andrew Garcia	Time: 1643		
Relinquished By:	Date:	Received By:	
	Time:		

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
Lisbeth.chavira@tetratech.com
REMARKS:

Delivered By: (Circle One)	Observed Temp. °C 3.0	Sample Condition Cool / Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☒ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C #140	☑ Yes ☑ Yes ☐ No ☐ No		Thermometer ID #140 Correction Factor 0°C

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

FORM-006 R 3.4 07/11/23

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

CARDINAL Laboratories

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

October 31, 2023

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: RED HILLS WEST 16 STATE TC 12H

Enclosed are the results of analyses for samples received by the laboratory on 10/12/23 10:55.

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

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12H Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH - 1 (0-1)	H235573-01	Soil	11-Oct-23 08:00	12-Oct-23 10:55
AH - 2 (0-1)	H235573-02	Soil	11-Oct-23 08:15	12-Oct-23 10:55
AH - 3 (0-1)	H235573-03	Soil	11-Oct-23 08:30	12-Oct-23 10:55
AH - 5 (0-1)	H235573-04	Soil	11-Oct-23 08:45	12-Oct-23 10:55
AH - 6 (0-1)	H235573-05	Soil	11-Oct-23 09:00	12-Oct-23 10:55

10/31/23 - Client added sample depths (see COC). This is the revised report and will replace the one sent on 10/18/23.

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12H Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

AH - 1 (0-1)

H235573-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**2240**		16.0	mg/kg	4	3101222	AC	13-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3101225	MS	12-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3101225	MS	12-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3101225	MS	12-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3101225	MS	12-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3101225	MS	12-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*118 %*	*71.5-134*		*3101225*	MS	*12-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3101218	MS	12-Oct-23	8015B	
DRO >C10-C28*	**12.3**		10.0	mg/kg	1	3101218	MS	12-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3101218	MS	12-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*64.0 %*	*48.2-134*		*3101218*	MS	*12-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*71.7 %*	*49.1-148*		*3101218*	MS	*12-Oct-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12H Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

AH - 2 (0-1)

H235573-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**848**		16.0	mg/kg	4	3101222	AC	13-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*71.5-134*		*3101320*	MS	*14-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3101218	MS	12-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3101218	MS	12-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3101218	MS	12-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*63.5 %*	*48.2-134*		*3101218*	MS	*12-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*69.8 %*	*49.1-148*		*3101218*	MS	*12-Oct-23*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12H Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

AH - 3 (0-1)

H235573-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**256**		16.0	mg/kg	4	3101222	AC	13-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.3 %*	*71.5-134*		*3101320*	MS	*14-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3101218	MS	12-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3101218	MS	12-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3101218	MS	12-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*69.6 %*	*48.2-134*		*3101218*	MS	*12-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*75.2 %*	*49.1-148*		*3101218*	MS	*12-Oct-23*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12H Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

AH - 5 (0-1)

H235573-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	3101222	AC	13-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.4 %*	*71.5-134*		*3101320*	MS	*14-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3101219	MS	12-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3101219	MS	12-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3101219	MS	12-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*102 %*	*48.2-134*		*3101219*	MS	*12-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*116 %*	*49.1-148*		*3101219*	MS	*12-Oct-23*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12H Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

AH - 6 (0-1)

H235573-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	3101316	AC	13-Oct-23	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3101320	MS	14-Oct-23	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.6 %*	*71.5-134*		*3101320*	MS	*14-Oct-23*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	3101219	MS	12-Oct-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3101219	MS	12-Oct-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3101219	MS	12-Oct-23	8015B	
Surrogate: 1-Chlorooctane			*74.0 %*	*48.2-134*		*3101219*	MS	*12-Oct-23*	*8015B*	
Surrogate: 1-Chlorooctadecane			*82.4 %*	*49.1-148*		*3101219*	MS	*12-Oct-23*	*8015B*	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12H Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3101222 - 1:4 DI Water										
Blank (3101222-BLK1)				Prepared & Analyzed: 12-Oct-23						
Chloride	ND	16.0	mg/kg							
LCS (3101222-BS1)				Prepared & Analyzed: 12-Oct-23						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (3101222-BSD1)				Prepared & Analyzed: 12-Oct-23						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	
Batch 3101316 - 1:4 DI Water										
Blank (3101316-BLK1)				Prepared & Analyzed: 13-Oct-23						
Chloride	ND	16.0	mg/kg							
LCS (3101316-BS1)				Prepared & Analyzed: 13-Oct-23						
Chloride	448	16.0	mg/kg	400		112	80-120			
LCS Dup (3101316-BSD1)				Prepared & Analyzed: 13-Oct-23						
Chloride	432	16.0	mg/kg	400		108	80-120	3.64	20	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12H Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3101225 - Volatiles										
Blank (3101225-BLK1)				Prepared & Analyzed: 12-Oct-23						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0597*		mg/kg	*0.0500*		*119*	*71.5-134*			
LCS (3101225-BS1)				Prepared & Analyzed: 12-Oct-23						
Benzene	2.11	0.050	mg/kg	2.00		105	82.8-130			
Toluene	2.04	0.050	mg/kg	2.00		102	86-128			
Ethylbenzene	2.03	0.050	mg/kg	2.00		102	85.9-128			
m,p-Xylene	3.96	0.100	mg/kg	4.00		99.0	89-129			
o-Xylene	1.89	0.050	mg/kg	2.00		94.6	86.1-125			
Total Xylenes	5.85	0.150	mg/kg	6.00		97.5	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0499*		mg/kg	*0.0500*		*99.9*	*71.5-134*			
LCS Dup (3101225-BSD1)				Prepared & Analyzed: 12-Oct-23						
Benzene	2.11	0.050	mg/kg	2.00		106	82.8-130	0.215	15.8	
Toluene	2.05	0.050	mg/kg	2.00		103	86-128	0.696	15.9	
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	85.9-128	0.233	16	
m,p-Xylene	3.96	0.100	mg/kg	4.00		99.0	89-129	0.00455	16.2	
o-Xylene	1.90	0.050	mg/kg	2.00		94.9	86.1-125	0.312	16.7	
Total Xylenes	5.86	0.150	mg/kg	6.00		97.6	88.2-128	0.104	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0478*		mg/kg	*0.0500*		*95.6*	*71.5-134*			
Batch 3101320 - Volatiles										
Blank (3101320-BLK1)				Prepared: 13-Oct-23 Analyzed: 14-Oct-23						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12H Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3101320 - Volatiles										
Blank (3101320-BLK1)				Prepared: 13-Oct-23 Analyzed: 14-Oct-23						
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0502*		mg/kg	*0.0500*		*100*	*71.5-134*			
LCS (3101320-BS1)				Prepared: 13-Oct-23 Analyzed: 14-Oct-23						
Benzene	2.02	0.050	mg/kg	2.00		101	82.8-130			
Toluene	2.08	0.050	mg/kg	2.00		104	86-128			
Ethylbenzene	2.12	0.050	mg/kg	2.00		106	85.9-128			
m,p-Xylene	4.34	0.100	mg/kg	4.00		108	89-129			
o-Xylene	2.03	0.050	mg/kg	2.00		101	86.1-125			
Total Xylenes	6.36	0.150	mg/kg	6.00		106	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0481*		mg/kg	*0.0500*		*96.1*	*71.5-134*			
LCS Dup (3101320-BSD1)				Prepared: 13-Oct-23 Analyzed: 14-Oct-23						
Benzene	1.92	0.050	mg/kg	2.00		96.2	82.8-130	4.73	15.8	
Toluene	1.98	0.050	mg/kg	2.00		98.9	86-128	5.10	15.9	
Ethylbenzene	2.01	0.050	mg/kg	2.00		100	85.9-128	5.41	16	
m,p-Xylene	4.11	0.100	mg/kg	4.00		103	89-129	5.46	16.2	
o-Xylene	1.90	0.050	mg/kg	2.00		95.0	86.1-125	6.40	16.7	
Total Xylenes	6.01	0.150	mg/kg	6.00		100	88.2-128	5.76	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0483*		mg/kg	*0.0500*		*96.6*	*71.5-134*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12I Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3101218 - General Prep - Organics										
Blank (3101218-BLK1)				Prepared & Analyzed: 12-Oct-23						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*35.5*		mg/kg	*50.0*		*70.9*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*39.0*		mg/kg	*50.0*		*78.0*	*49.1-148*			
LCS (3101218-BS1)				Prepared & Analyzed: 12-Oct-23						
GRO C6-C10	181	10.0	mg/kg	200		90.7	66.4-123			
DRO >C10-C28	183	10.0	mg/kg	200		91.6	66.5-118			
Total TPH C6-C28	365	10.0	mg/kg	400		91.2	77.6-123			
Surrogate: 1-Chlorooctane	*39.1*		mg/kg	*50.0*		*78.2*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*40.6*		mg/kg	*50.0*		*81.2*	*49.1-148*			
LCS Dup (3101218-BSD1)				Prepared & Analyzed: 12-Oct-23						
GRO C6-C10	176	10.0	mg/kg	200		88.2	66.4-123	2.76	17.7	
DRO >C10-C28	183	10.0	mg/kg	200		91.7	66.5-118	0.0371	21	
Total TPH C6-C28	360	10.0	mg/kg	400		89.9	77.6-123	1.34	18.5	
Surrogate: 1-Chlorooctane	*39.8*		mg/kg	*50.0*		*79.6*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*42.7*		mg/kg	*50.0*		*85.5*	*49.1-148*			
Batch 3101219 - General Prep - Organics										
Blank (3101219-BLK1)				Prepared & Analyzed: 12-Oct-23						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*40.8*		mg/kg	*50.0*		*81.6*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*47.3*		mg/kg	*50.0*		*94.7*	*49.1-148*			

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: RED HILLS WEST 16 STATE TC 12I Project Number: 212C-MD-03246 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:01

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3101219 - General Prep - Organics										
LCS (3101219-BS1)				Prepared & Analyzed: 12-Oct-23						
GRO C6-C10	176	10.0	mg/kg	200		87.8	66.4-123			
DRO >C10-C28	207	10.0	mg/kg	200		104	66.5-118			
Total TPH C6-C28	383	10.0	mg/kg	400		95.7	77.6-123			
Surrogate: 1-Chlorooctane	*44.9*		mg/kg	*50.0*		*89.9*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*55.7*		mg/kg	*50.0*		*111*	*49.1-148*			
LCS Dup (3101219-BSD1)				Prepared & Analyzed: 12-Oct-23						
GRO C6-C10	170	10.0	mg/kg	200		84.9	66.4-123	3.35	17.7	
DRO >C10-C28	203	10.0	mg/kg	200		102	66.5-118	2.01	21	
Total TPH C6-C28	373	10.0	mg/kg	400		93.2	77.6-123	2.62	18.5	
Surrogate: 1-Chlorooctane	*43.8*		mg/kg	*50.0*		*87.6*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*49.7*		mg/kg	*50.0*		*99.4*	*49.1-148*			

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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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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	ConocoPhillips	**BILL TO** P.O. #:	
Project Manager:	Christian Llull	Company:	Etta Tech
Address:		Attn:	Christian Llull
City:	State: Zip:	Address:	
Phone #:	Fax #:	City:	
Project #:	212C-MD-03246 Project Owner:	State: Zip:	
Project Name:	Red Hills West 16 State TC 12H	Phone #:	
Project Location:	Lea Co, NM	Fax #:	
Sampler Name:	Andrew Garcia		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	Chlorides 4500
H235573	*												2023				
1	AH-1 (0-1)	G	1			X					X		Oct 11 12	0800	X	X	X
2	AH-2 (0-1)													0815			
3	AH-3 (0-1)													0830			
4	AH-5 (0-1)													0845			
5	AH-6 (0-1)													0900			

Relinquished By:	Andrew Garcia	Date: 10-12-23 Time: 1055	Received By:
Relinquished By:		Date: Time:	Received By:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Observed Temp. °C 14.6 Corrected Temp. °C	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No
CHECKED BY: (Initials)			

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

All Results are emailed. Please provide Email address:

* Customer added Depths TO - 10/27/23

REMARKS:
Christian.Llull@ettatech.com
Lisbeth.Chavira@ettatech.com

Turnaround Time: Standard ☒ Rush ☐

Thermometer ID #140
Correction Factor 0°C

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

FORM-006 R 3.4 07/11/23

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

CARDINAL Laboratories

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

December 18, 2023

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: RED HILLS WEST 16 STATE TC #12H RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 12/13/23 9:50.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/13/2023	Sampling Date:	12/12/2023
Reported:	12/18/2023	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: T - 1 (0-1') (H236643-01)

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	12/13/2023	ND	1.94	97.2	2.00	15.0	
Toluene*	<0.050	0.050	12/13/2023	ND	2.05	102	2.00	15.4	
Ethylbenzene*	<0.050	0.050	12/13/2023	ND	2.16	108	2.00	15.7	
Total Xylenes*	<0.150	0.150	12/13/2023	ND	6.41	107	6.00	17.0	
Total BTEX	<0.300	0.300	12/13/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**720**	16.0	12/14/2023	ND	448	112	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	12/13/2023	ND	224	112	200	1.21	
DRO >C10-C28*	<10.0	10.0	12/13/2023	ND	222	111	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	12/13/2023	ND					

Surrogate: 1-Chlorooctane *95.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *105 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/13/2023	Sampling Date:	12/12/2023
Reported:	12/18/2023	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: T - 1 (2'-3') (H236643-02)

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	12/13/2023	ND	1.94	97.2	2.00	15.0	
Toluene*	<0.050	0.050	12/13/2023	ND	2.05	102	2.00	15.4	
Ethylbenzene*	<0.050	0.050	12/13/2023	ND	2.16	108	2.00	15.7	
Total Xylenes*	<0.150	0.150	12/13/2023	ND	6.41	107	6.00	17.0	
Total BTEX	<0.300	0.300	12/13/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.0 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1760**	16.0	12/14/2023	ND	448	112	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	12/13/2023	ND	224	112	200	1.21	
DRO >C10-C28*	**20.9**	10.0	12/13/2023	ND	222	111	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	12/13/2023	ND					

Surrogate: 1-Chlorooctane *87.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.9 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/13/2023	Sampling Date:	12/12/2023
Reported:	12/18/2023	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: T - 1 (3'-4') (H236643-03)

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	12/13/2023	ND	1.94	97.2	2.00	15.0	
Toluene*	<0.050	0.050	12/13/2023	ND	2.05	102	2.00	15.4	
Ethylbenzene*	<0.050	0.050	12/13/2023	ND	2.16	108	2.00	15.7	
Total Xylenes*	<0.150	0.150	12/13/2023	ND	6.41	107	6.00	17.0	
Total BTEX	<0.300	0.300	12/13/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3600**	16.0	12/14/2023	ND	448	112	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	12/13/2023	ND	224	112	200	1.21	
DRO >C10-C28*	<10.0	10.0	12/13/2023	ND	222	111	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	12/13/2023	ND					

Surrogate: 1-Chlorooctane *81.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.4 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/13/2023	Sampling Date:	12/12/2023
Reported:	12/18/2023	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: T - 1 (5'-6') (H236643-04)

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	12/13/2023	ND	1.94	97.2	2.00	15.0	
Toluene*	<0.050	0.050	12/13/2023	ND	2.05	102	2.00	15.4	
Ethylbenzene*	<0.050	0.050	12/13/2023	ND	2.16	108	2.00	15.7	
Total Xylenes*	<0.150	0.150	12/13/2023	ND	6.41	107	6.00	17.0	
Total BTEX	<0.300	0.300	12/13/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	12/14/2023	ND	448	112	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	12/13/2023	ND	224	112	200	1.21	
DRO >C10-C28*	<10.0	10.0	12/13/2023	ND	222	111	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	12/13/2023	ND					

Surrogate: 1-Chlorooctane *75.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *82.9 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	12/13/2023	Sampling Date:	12/12/2023
Reported:	12/18/2023	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: T - 2 (0-1') (H236643-05)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2023	ND	1.94	97.2	2.00	15.0	
Toluene*	<0.050	0.050	12/13/2023	ND	2.05	102	2.00	15.4	
Ethylbenzene*	<0.050	0.050	12/13/2023	ND	2.16	108	2.00	15.7	
Total Xylenes*	<0.150	0.150	12/13/2023	ND	6.41	107	6.00	17.0	
Total BTEX	<0.300	0.300	12/13/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.5 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**480**	16.0	12/14/2023	ND	448	112	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	12/13/2023	ND	224	112	200	1.21	
DRO >C10-C28*	<10.0	10.0	12/13/2023	ND	222	111	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	12/13/2023	ND					

Surrogate: 1-Chlorooctane *81.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *86.6 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/13/2023	Sampling Date:	12/12/2023
Reported:	12/18/2023	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: T - 2 (2'-3') (H236643-06)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2023	ND	1.94	97.2	2.00	15.0	
Toluene*	<0.050	0.050	12/13/2023	ND	2.05	102	2.00	15.4	
Ethylbenzene*	<0.050	0.050	12/13/2023	ND	2.16	108	2.00	15.7	
Total Xylenes*	<0.150	0.150	12/13/2023	ND	6.41	107	6.00	17.0	
Total BTEX	<0.300	0.300	12/13/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	12/14/2023	ND	448	112	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	12/13/2023	ND	224	112	200	1.21	
DRO >C10-C28*	<10.0	10.0	12/13/2023	ND	222	111	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	12/13/2023	ND					

Surrogate: 1-Chlorooctane *89.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	12/13/2023	Sampling Date:	12/12/2023
Reported:	12/18/2023	Sampling Type:	Soil
Project Name:	RED HILLS WEST 16 STATE TC #12H RE	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03246	Sample Received By:	Shalyn Rodriguez
Project Location:	LEA COUNTY, NM		

Sample ID: AH - 4 (0-1') (H236643-07)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2023	ND	1.94	97.2	2.00	15.0	
Toluene*	<0.050	0.050	12/13/2023	ND	2.05	102	2.00	15.4	
Ethylbenzene*	<0.050	0.050	12/13/2023	ND	2.16	108	2.00	15.7	
Total Xylenes*	<0.150	0.150	12/13/2023	ND	6.41	107	6.00	17.0	
Total BTEX	<0.300	0.300	12/13/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	12/14/2023	ND	400	100	400	11.3	

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	12/13/2023	ND	224	112	200	1.21	
DRO >C10-C28*	<10.0	10.0	12/13/2023	ND	222	111	200	3.37	
EXT DRO >C28-C36	<10.0	10.0	12/13/2023	ND					

Surrogate: 1-Chlorooctane *60.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *61.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

QR-04	The RPD for the BS/BSD was outside of historical limits.
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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Tetra Tech	**BILL TO**
Project Manager: Christian Llull	P.O. #:
Address: 8911 Capital o Texas Hwy, Suite 2310	Company: Tetra Tech
City: Austin State: TX Zip:	Attn: Christian Llul
Phone #: (512)565-0190 Fax #:	Address: EMAIL
Project #: 212C-MD-03246 Project Owner: ConocoPhillips	City:
Project Name: Red Hills West 16 State TC #12H Release	State: Zip:
Project Location: Lea County, New Mexico	Phone #:
Sampler Name: Colton Bickerstaff	Fax #:

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH 8015M	BTEX 8021B	Chloride SM4500Cl-B
H231643																	
1	T-1 (0-1')	G	1			X					X		12/12/2023		X	X	X
2	T-1 (2'-3')	G	1			X					X		12/12/2023		X	X	X
3	T-1 (3'-4')	G	1			X					X		12/12/2023		X	X	X
4	T-1 (5'-6')	G	1			X					X		12/12/2023		X	X	X
5	T-2 (0-1')	G	1			X					X		12/12/2023		X	X	X
16	T-2 (2'-3')	G	1			X					X		12/12/2023		X	X	X
7	AH-4 (0-1')	G	1			X					X		12/12/2023		X	X	X

ANALYSIS REQUEST

Relinquished By: Colton Bickerstaff	Date: 12/13/23 Time: 0950	Received By: SRodriguez	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
			All Results are emailed. Please provide Email address: Christian.Llull@tetratech.com
Relinquished By:	Date: Time:	Received By:	REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 0.8 Corrected Temp. °C	Sample Condition Cool: ☒ Yes ☐ ~~No~~ Intact: ☐ Yes ☐ ~~No~~	CHECKED BY: (Initials) SR	Turnaround Time: Standard ☒ Bacteria (only) Sample Condition Rush: N/A ☐ Cool Intact Observed Temp. °C Thermometer ID: ~~#113~~ #140 Correction Factor: ~~0.5°C~~ ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 332967

QUESTIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 332967
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nTO1431831520**
Incident Name	**NTO1431831520 RED HILLS WEST 16 STATE TC #012H @ 30-025-41706**
Incident Type	**Release Other**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-025-41706] RED HILLS WEST 16 STATE TC #012H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	RED HILLS WEST 16 STATE TC #012H
Date Release Discovered	11/14/2014
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Release Other
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	Cause: Human Error | Frac Tank | Drilling Mud/Fluid | Released: 15 BBL | Recovered: 14 BBL | Lost: 1 BBL.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 332967
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Christian LLuLL Title: Project Manager Email: christian.llull@tetratech.com Date: 04/12/2024

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QUESTIONS (continued)

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 332967
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	Attached Document
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	5840
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	10320
GRO+DRO (EPA SW-846 Method 8015M)	7310
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	06/03/2024
On what date will (or did) the final sampling or liner inspection occur	06/07/2024
On what date will (or was) the remediation complete(d)	06/07/2024
What is the estimated surface area (in square feet) that will be reclaimed	1559
What is the estimated volume (in cubic yards) that will be reclaimed	116
What is the estimated surface area (in square feet) that will be remediated	1559
What is the estimated volume (in cubic yards) that will be remediated	116
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 332967
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Christian LLuLL Title: Project Manager Email: christian.llull@tetratech.com Date: 04/12/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 332967
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 332967
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**317584**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**02/28/2024**
What was the (estimated) number of samples that were to be gathered	**16**
What was the sampling surface area in square feet	**3025**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 332967

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 332967
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Work plan approved. Variance request to sample every 400 square feet approved. Submit a report via the OCD permitting portal by August 19, 2024.	4/15/2024