TETRA TECH

December 13, 2024

District Supervisor
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Re: Remediation Work Plan
Chevron Mid Continent Business Unit
Cicada Unit #022H Flowline Release
Unit Letter D, Section 35, Township 25 South, Range 27 East
Eddy County, New Mexico
nAPP2420727981 and nAPP2424378052
DOR: 7/19/2024 and 8/30/2024
Landowner: BLM

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by Chevron U.S.A., Inc. (Chevron) to assess two releases that occurred at the Cicada Unit #022H (API 30-015-45423). The release footprint is located in Public Land Survey System (PLSS) Unit Letter D, Section 35, Township 25 South, and Range 27 East, in Eddy County, New Mexico (Site). The approximate release point coordinates are 32.093323°, -104.164922°. The Site location is shown on Figures 1 and 2.

BACKGROUND

According to the State of New Mexico Notice of Release report, the initial release was discovered on July 19, 2024. The release was caused by a pinhole leak from a 4-inch below grade flowline. Approximately 9 barrels (bbls) of produced water and 2 bbls of crude oil were released on the lease pad and adjacent pasture, of which no produced water or oil were recovered. The initial C-141 report was submitted to and approved by the New Mexico Oil Conservation Division (NMOCD) on July 25, 2024, and the release was assigned the Incident ID nAPP2420727981.

A second release was discovered on August 30, 2024. According to the State of New Mexico Notice of Release report, the release was caused by a pinhole leak from a 4-inch below grade flowline adjacent to the initial release point. Approximately 51 bbls of produced water and 3 bbls of crude oil were released on the lease pad into the previously excavated area from the initial release and adjacent pasture, of which 50 bbls of produced water and 3 bbls of oil were recovered. The initial C-141 report was submitted to and approved by the New Mexico Oil Conservation Division (NMOCD) on August 30, 2024, and the release was assigned the Incident ID nAPP2424378052. After the second release occurred, Chevron Operations personnel excavated around the shut-in buried lines to make repairs.

Chevron requested an extension from the NMOCD for the workplan submittal in an email dated September 24, 2024. The request was made after the second release occurred at the Cicada #022H lease pad (Incident ID nAPP2424378052), to allow for complete assessment and remediation planning for both releases. The extension request was approved by the NMOCD via email on October 8, 2024, for a new due date of December 17, 2024. A copy of the regulatory correspondence is included in Appendix A.

Tetra Tech
901 West Wall St., Suite 100, Midland, TX 79701
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Chevron requested an additional extension from the NMOCD for the workplan submittal in an email dated November 20, 2024. The request was made to allow for additional time needed to complete assessment activities due to pipe removal and repairs in the release point area. The extension request was approved by the NMOCD via email on November 20, 2024, for a new due date of December 30, 2024. A copy of the regulatory correspondence is included in Appendix A.

LAND OWNERSHIP

According to the NMOCD Oil and Gas Map, the Site is located on federal lands managed by the Bureau of Land Management (BLM). A copy of this remediation work plan will be provided to the BLM for approval prior to the initiation of the proposed remediation activities.

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)	Between 51 and 75 ft
Method used to determine the depth to ground water	NM OSE iWaters Database Search
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	Greater than 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 private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
A (non-karst) unstable area	Greater than 5 (mi.)
Categorized risk of this well / site being in a karst geology	High
A 100-year floodplain	Between ½ and 1 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site?	Yes

According to the New Mexico Office of the State Engineer (NMOSE) reporting system, there is one well within a ½-mile (800-meter) radius of the Site, located approximately 0.43 miles (692 meters) east of the release point. The depth to water is measured at 69 feet below ground surface (bgs). The site characterization data is included in Appendix B.

REGULATORY FRAMEWORK

Based upon the release footprints 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, the remediation RRALs for the Site are as follows:

Constituent	RRAL
Chloride	600 mg/kg
TPH	100 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

SITE ASSESSMENT ACTIVITIES

Tetra Tech personnel were onsite on August 12, 2024 through August 13, 2024, to conduct release assessment activities for the initial release on behalf of Chevron. Four (4) test trenches (TT-1 through TT-4) were installed within the release footprint in order to vertically delineate the release extent. Four horizontal sample locations (H-1 through H-5) were installed along the perimeter of the release to horizontally delineate the release extent. Photographic documentation of the release extent is included in Appendix C. The sampling locations are presented on Figure 3.

A total of twenty-four (24) soil samples were collected during the August assessment events and submitted to Eurofins Testing in Midland, Texas to be analyzed for TPH by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300. Copies of the laboratory analytical reports and chain-of-custody documentation are included in Appendix D.

The laboratory analytical results are summarized in Table 1. Analytical results associated with soil sampling locations TT-1, TT-2, TT-3, and TT-4 exceeded the chloride RRAL of 600 mg/kg in various sampling intervals ranging from the surface to 7 feet bgs. Analytical results associated with sampling locations TT-1 and TT-4 also exceeded the Total TPH RRAL of 100 mg/kg at select sampling intervals from the surface to 6 feet bgs. There were no analytical results which exceeded the benzene or Total BTEX RRALs.

On October 29, 2024 through November 15, 2024, Tetra Tech personnel returned to the Site to conduct release assessment activities for the second release on behalf of Chevron. A combination of seven (7) Auger holes and test trenches (AH-1/PH-1, AH-2/BH-2, TT-5, TT-6, TT-7, and TT-8) were installed within the release footprint in order to vertically delineate the release extent. Nine (9) horizontal sample locations (H-1.3 through H-9.3) were installed along the perimeter of the release to horizontally delineate the release extent. Photographic documentation of the release extent is included in Appendix C. The sampling locations are presented on Figure 3.

In conjunction with delineation activities, below-grade piping was removed and replaced. To facilitate piping repair and replacement, Chevron operations removed soil around the shut-in piping as well as removed as much contaminated soil as safely feasible in the immediate release point area to achieve vertical delineation. Composite bottom hole samples (PH-1 and BH-2) were collected where auger holes (AH-1 and AH-2) were installed.

A total of forty-one (41) soil samples were collected during the August assessment events and submitted to Cardinal Laboratories in Hobbs, NM to be analyzed for TPH by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by Method SM 4500. Copies of the laboratory analytical reports and chain-of-custody documentation are included in Appendix D.

The laboratory analytical results are summarized in Table 2. Analytical results associated with soil sampling locations AH-1/PH-1, AH-2, AH-3, TT-5, TT-6, TT-7, and TT-8 exceeded the chloride RRAL of 600 mg/kg

in sampling intervals ranging from the surface to 11 feet bgs. Analytical results associated with sampling locations AH-1/PH-1, AH-2, AH-3, TT-5, TT-7, and TT-8 also exceeded the Total TPH RRAL of 100 mg/kg at select sampling intervals from the surface to 10.5 feet bgs. Analytical samples associated with sampling location AH-3 also exceeded the Total BTEX RRAL of 50 mg/kg in the surface sampling interval. There were no analytical results which exceeded the benzene RRAL.

REMEDIATION WORK PLAN

Based on the collected analytical results, Chevron proposes to remove the impacted material for both releases simultaneously, as shown in Figure 4. Impacted soils in the vicinity of assessment trenches TT-3, TT-5 and TT-6 will be excavated using heavy equipment (backhoes, hoe rams, track hoes and Hydrovac) to a maximum total depth of 1 foot below the surrounding surface or until a representative sample from the walls and bottom of the excavation is below the RRALs. Impacted soils in the vicinity of test trench TT-2 will be excavated to a total depth of 1.5 feet below the surrounding surface or until a representative sample is below the RRALs.Impacted soils in the vicinity of test trench TT-2 will be excavated to a total depth of 2 feet below the surrounding surface or until a representative sample is below RRALs. Impacted soils in the vicinity of boring AH-3 will be excavated to a total depth of 3 feet below the surrounding surface or until a representative sample is below the RRALs to confirm vertical delineation. Any area containing pressurized lines will be hand-dug to the maximum extent practicable and heavy equipment will come no more than 3 feet from any pressurized lines.

As stated in the previous section of this report, soils in the vicinity of AH-1 and AH-2 were previously removed along with below grade piping during repair and replacement activities. Composite bottom hole samples (PH-1 and BH-2) were collected where auger holes (AH-1 and AH-2) were installed. No additional excavation activities are proposed for this area.

Excavated soils will be transported offsite and disposed of at an NMOCD-approved or permitted facility. Chevron requests a variance to collect confirmation floor and sidewall samples every 300 square feet for verification of remedial activities, and to be analyzed for TPH, BTEX, and chlorides. The proposed excavation encompasses a surface area of approximately 4,250 square feet including excavation bottom and sidewalls. Once results are received, NMOCD will be notified, and the excavation will then be backfilled with clean material to surface grade. The estimated volume of material to be remediated is approximately 285 cubic yards.

CONCLUSION

Chevron proposes to begin remediation activities at the Site within 90 days of NMOCD plan approval. Upon completion of the proposed work, a final closure report detailing the remediation activities, and the results of the confirmation sampling will be submitted to NMOCD. If you have any questions concerning the soil assessment or the proposed remediation activities for the Site, please contact Tetra Tech at (432) 682-4559.

Sincerely,
Tetra Tech, Inc.

John Faught, GIT
Project Manager

Samantha Abbott, PG
Project Manager

cc:
Ms. Kennedy Lincoln – Chevron MCBU
Project Manager

LIST OF ATTACHMENTS

Figures:

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

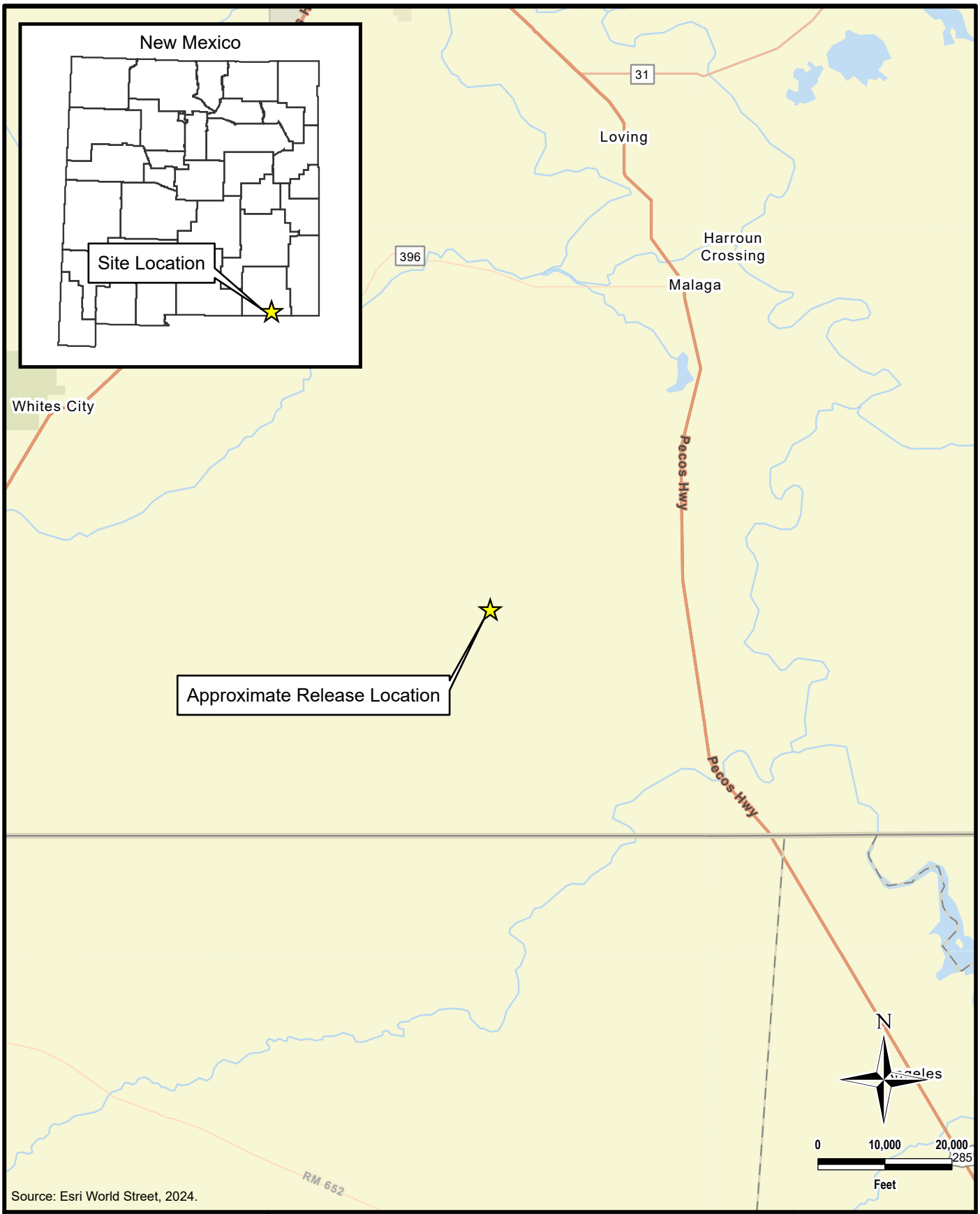
Tables:

Table 1 – Summary of Analytical Results – Soil Assessment

Appendices:

Appendix A – Regulatory Correspondence
Appendix B – Site Characterization Data
Appendix C – Photographic Documentation
Appendix D – Laboratory Analytical Data

FIGURES



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CHEVRON MID CONTINENT BUSINESS UNIT

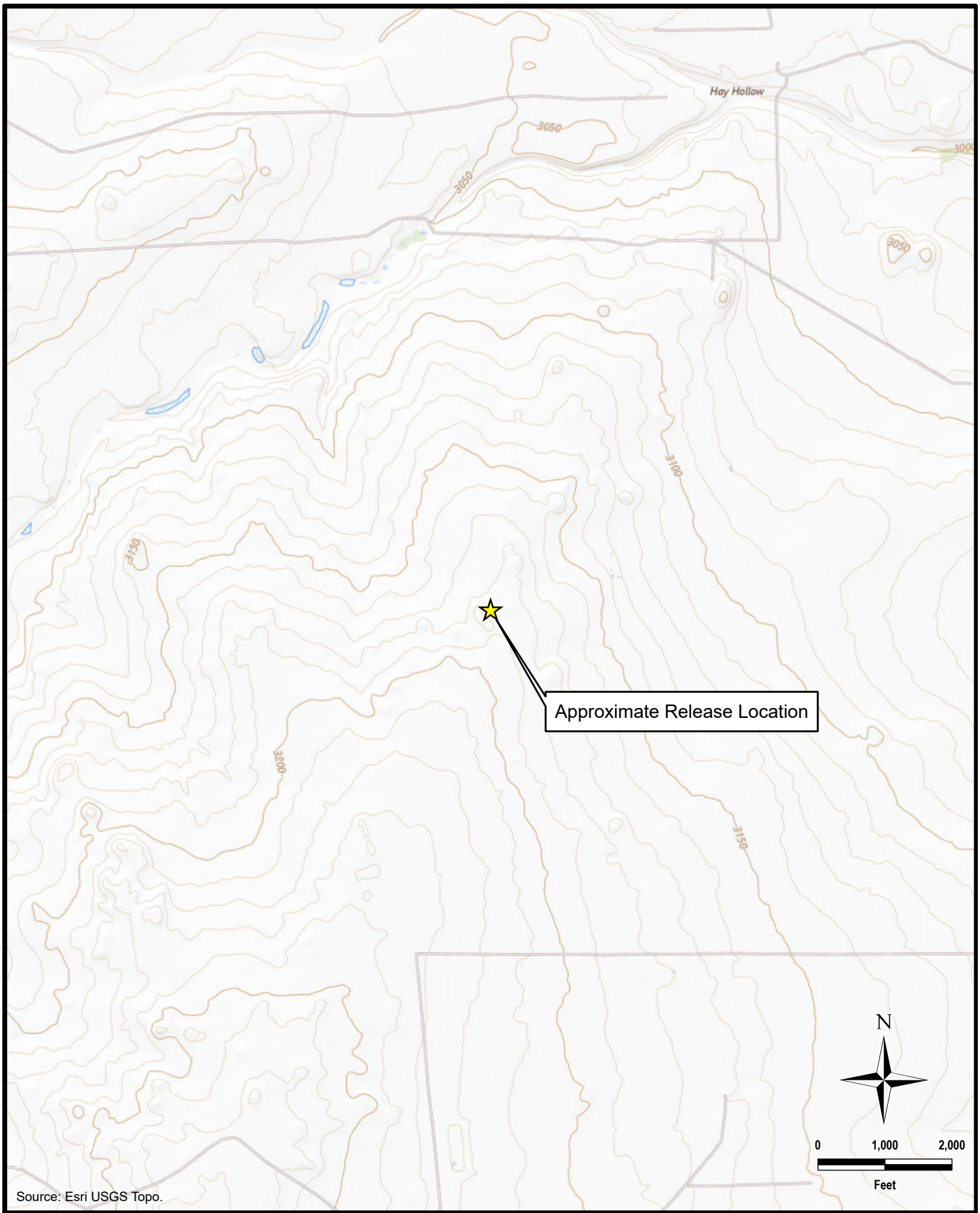
NAPP2420727981 and
NAPP2424378052
(32.093063°, -104.165862°)
EDDY COUNTY, NEW MEXICO

CICADA UNIT #022H
OVERVIEW MAP

PROJECT NO.:	212C-MD-03521
DATE:	December 12, 2024
DESIGNED BY:	LMV

Figure No.

1



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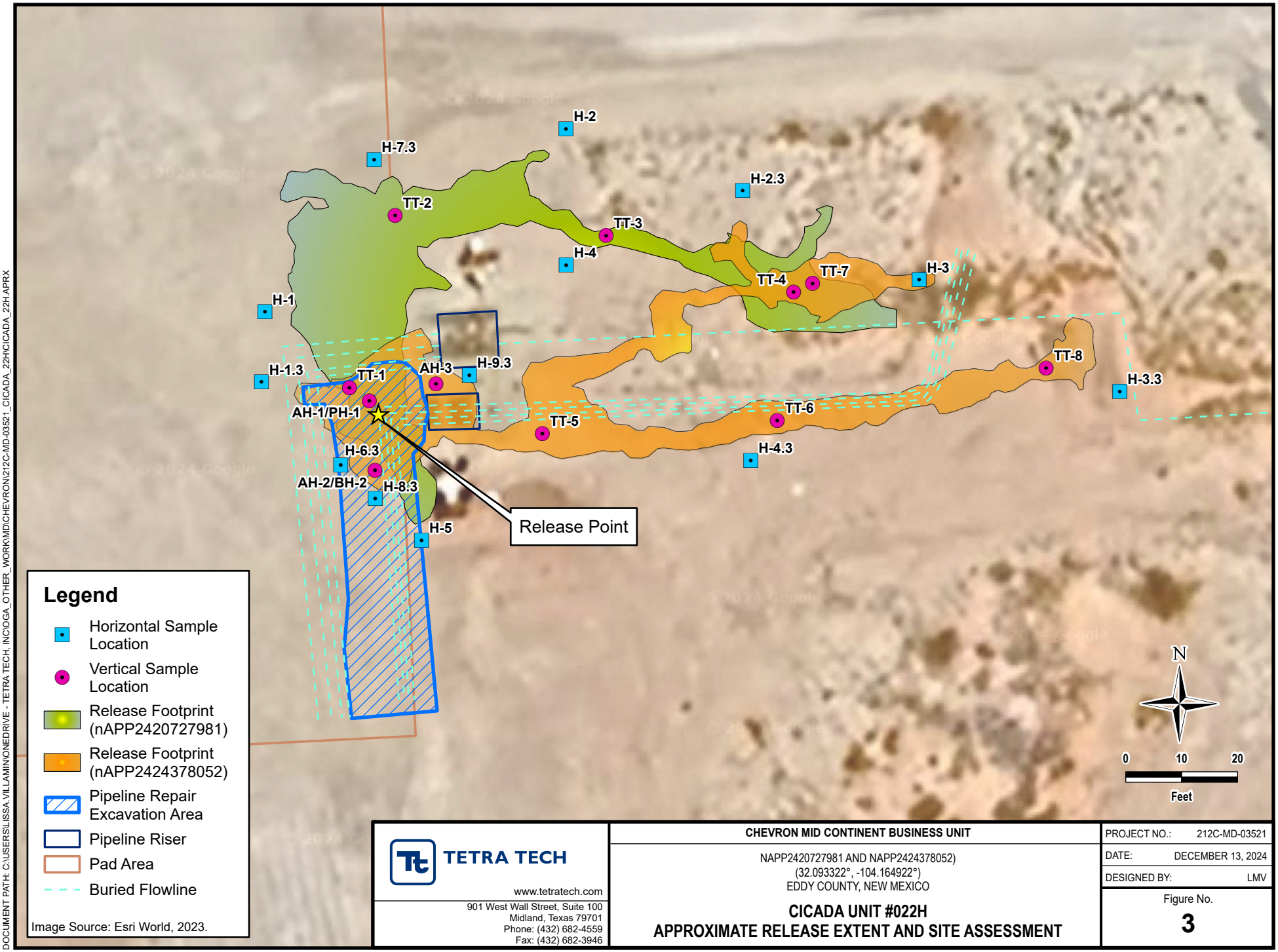
CHEVRON MID CONTINENT BUSINESS UNIT

NAPP2420727981 and NAPP242378052
(32.093063°, -104.165862°)
EDDY COUNTY, NEW MEXICO

CICADA UNIT #022H
TOPOGRAPHIC MAP

PROJECT NO.:	212C-MD-03521
DATE:	December 12, 2024
DESIGNED BY:	LMV

Figure No.
2



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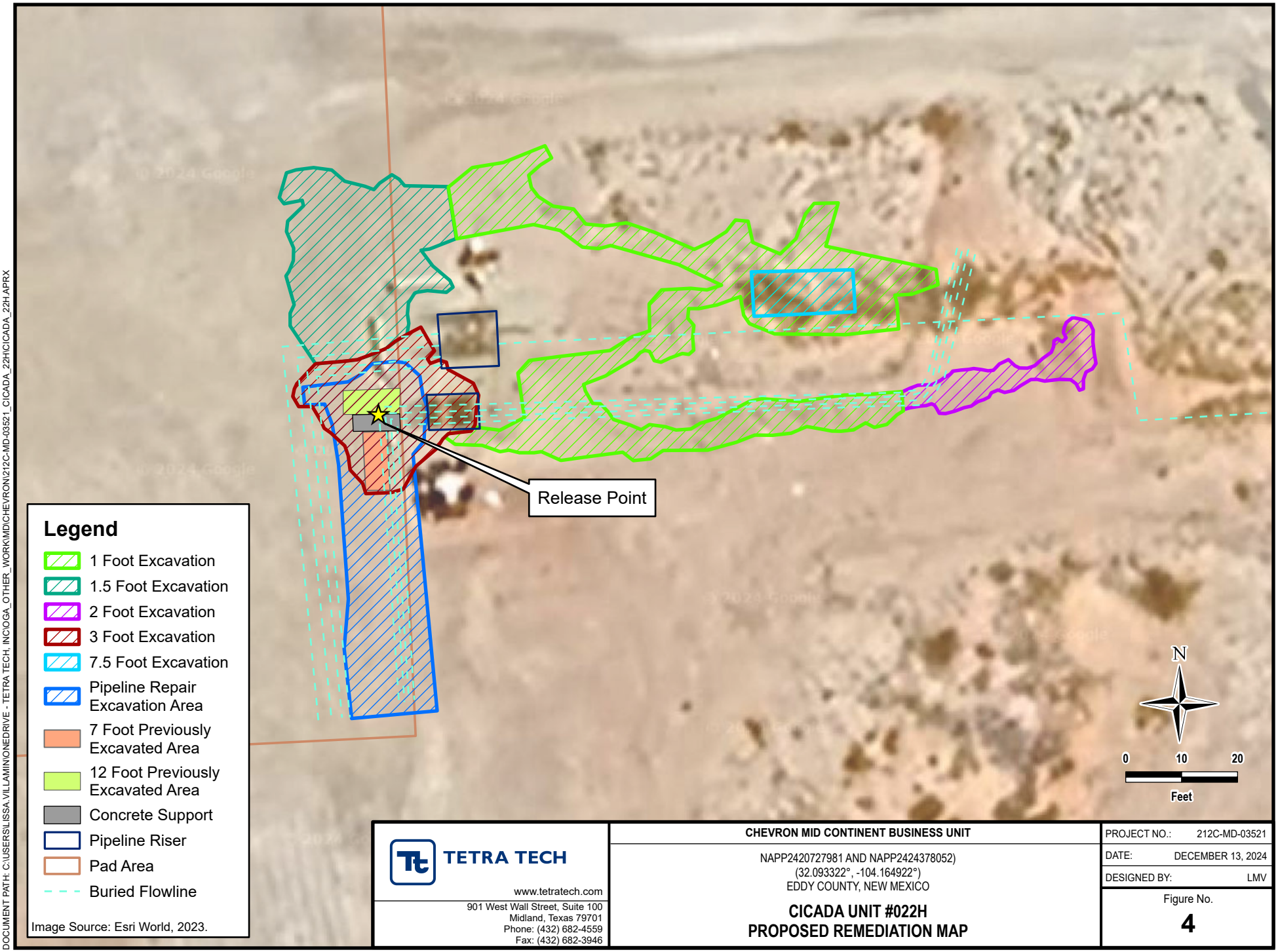
CHEVRON MID CONTINENT BUSINESS UNIT

NAPP2420727981 AND NAPP2424378052)
(32.093322°, -104.164922°)
EDDY COUNTY, NEW MEXICO

CICADA UNIT #022H
APPROXIMATE RELEASE EXTENT AND SITE ASSESSMENT

PROJECT NO.:	212C-MD-03521
DATE:	DECEMBER 13, 2024
DESIGNED BY:	LMV

Figure No.
3



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CHEVRON MID CONTINENT BUSINESS UNIT

NAPP2420727981 AND NAPP2424378052)
(32.093322°, -104.164922°)
EDDY COUNTY, NEW MEXICO

CICADA UNIT #022H
PROPOSED REMEDIATION MAP

PROJECT NO.:	212C-MD-03521
DATE:	DECEMBER 13, 2024
DESIGNED BY:	LMV

Figure No.
4

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT - nAPP2420727981 (DOR 7/19/2024)
CHEVRON MCBU
CICADA UNIT #022H
EDDY COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride[1]		BTEX[2]										TPH[3]							
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		MRO		Total TPH	
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q
VERTICAL DELINEATION SAMPLES																						
TT-1	8/13/2024	4'	***15800***		<0.00138	U	<0.00199	U	<0.00108	U	<0.00227	U	<0.00227	U	<14.5	U	***1380***		<15.1	U	***1380***	
TT-2	8/12/2024	0-0.5'	***3300***	F1	<0.00140	U	<0.00201	U	<0.00110	U	0.00489	U	0.00489	U	<14.4	U	<32.2	J	<15.0	U	32.2	J
		1'	***612***		<0.00139	U	<0.00200	U	<0.00109	U	<0.00228	U	<0.00228	U	<14.6	U	<15.2	U	<15.2	U	<15.2	U
		2'	65.8		<0.00138	U	<0.00199	U	<0.00108	U	<0.00227	U	<0.00227	U	<14.6	U	<15.3	U	<15.3	U	<15.3	U
		3'	257		<0.00140	U	<0.00201	U	<0.00109	U	<0.00229	U	<0.00229	U	<14.5	U	25.7	J	<15.1	U	25.7	J
		4'	172		<0.00139	U	<0.00200	U	<0.00109	U	<0.00228	U	<0.00228	U	<14.4	U	17.6	J	<15.0	U	17.6	J
TT-3	8/12/2024	0-0.5'	***972***		<0.00139	U	<0.00200	U	<0.00109	U	<0.00229	U	<0.00229	U	<14.5	U	37.8	J	<15.1	U	37.8	J
		1'	246		<0.00140	U	<0.00201	U	<0.00110	U	<0.00230	U	<0.00230	U	<14.5	U	47.1	J	<15.1	U	47.1	J
		2'	156		<0.00138	U	<0.00199	U	<0.00108	U	<0.00227	U	<0.00227	U	<14.6	U	<15.2	U	<15.2	U	<15.2	U
		3'	308		<0.00139	U	<0.00200	U	0.00109	J	<0.00229	U	<0.00229	U	<14.6	U	15.3	J	<15.3	U	15.3	J
		4'	119		<0.00139	U	<0.00200	U	<0.00109	U	<0.00228	U	<0.00228	U	<14.7	U	46.6	J	<15.3	U	46.6	J
TT-4	8/12/2024	0-0.5'	***4950***		<0.00138	U	0.0124		0.00747		0.0071		0.0270		58.2		***3890***		<15.1	U	***3950***	
		1'	***3200***		0.00175	J	0.255		0.177		0.648		1.08		***438***		***7170***		<15.0		***7610***	
		2'	***4450***		0.00253		0.233		0.0103		0.374		0.620		***634***		***8880***		<15.1	U	***9510***	
		3'	***3900***		0.00176	J	0.234		0.146		0.485		0.867		***742***		***11700***		<15.1	U	***12400***	
		4'	***1530***		<0.00138	U	0.138		<0.00108	U	0.0079		0.0217		<14.7	U	***893***		<15.3	U	***893***	
		5'	***4380***		<0.00138	U	<0.00199	U	<0.00108	U	0.0136		0.0210		18.2	J	***1350***		<15.2	U	***1370***	
		6'	***819***		<0.00140	U	<0.00201	U	<0.00109	U	0.0375		0.0375		<14.6	U	***614***		<15.3		***614***	
		7'	***691***		<0.00141	U	<0.00202	U	<0.00110	U	<0.00231	U	<0.00231	U	<14.7	U	65.8		<15.3	U	65.8	
HORIZONTAL DELINEATION SAMPLES																						
H-1	8/12/2024	0-1'	199		<0.00139	U	<0.00200	U	<0.00109	U	<0.00228	U	<0.00228	U	<14.5	U	<15.1	U	<15.1	U	<15.1	U
H-2	8/12/2024	0-1'	119		<0.00138	U	<0.00199	U	<0.00108	U	<0.00227	U	<0.00227	U	<14.7	U	<15.3	U	<15.3	U	<15.3	U
H-3	8/12/2024	0-1'	242		<0.00140	U	<0.00201	U	<0.00110	U	<0.00230	U	<0.00230	U	<14.5	U	<15.1	U	<15.1	U	<15.1	U
H-4	8/12/2024	0-1'	78.0		<0.00141	U	<0.00202	U	<0.00110	U	<0.00231	U	<0.00231	U	<14.5	U	<15.1	U	<15.1	U	<15.1	U
H-5	8/12/2024	0-1'	188		<0.00139	U	<0.00200	U	<0.00109	U	<0.00228	U	<0.00228	U	<14.4	U	<15.0	U	<15.0	U	<15.0	U

NOTES:

ft. Feet

bgs Below ground surface

mg/kg Milligrams per kilogram

TPH Total Petroleum Hydrocarbons

GRO Gasoline range organics

DRO Diesel range organics

MRO Motor Oil range organics

NS Sample not analyzed for parameter

1 EPA Method 300.0

2 EPA Method 8021B

3 Method SW8015 Mod

Shaded intervals are proposed for excavation

Qualifiers:

B Compound was found in the blank and sample.

F1 MS and/or MSD recovery exceeds control limits.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U Indicates the analyte was analyzed for but not detected.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
SOIL ASSESSMENT - nAPP2424378052 (DOR 8/30/2024)
CHEVRON MCBU CICADA UNIT #022H
EDDY COUNTY, NEW MEXICO

Sample ID	Sample Date	Sample Depth	Chloride[1]		BTEX[2]										TPH[3]									
					Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		MRO		Total TPH	
		ft. bgs	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q
VERTICAL DELINEATION SAMPLES																								
AH-1	10/31/2024	5-6'	***5600***		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	***410***		98		***508***	
		6-7'	***1500***		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	***351***		92.9		***444***	
		7-8'	***624***		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	26.0		<25.0	U	26.0	
		8-9'	***1250***		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	***166***		39.1		***205***	
	11/5/2024	9-9.5'	***1120***		<0.050	U	<0.050	U	<0.050	U	<0.150	U	<0.300	U	<10.0	U	***375***		66.7		***442***	
		9.5-10'	***848***		<0.050	U	<0.050	U	<0.050	U	<0.150	U	<0.300	U	<10.0	U	***512***		89.2		***601***	
		10-10.5	***832***		<0.050	U	<0.050	U	<0.050	U	0.282		<0.300	U	<10.0	U	***476***		83.0		***559***	
	11/14/2024	11'	***624***		<0.050	U	<0.050	U	<0.050	U	<0.150	U	<0.300	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U
AH-2	10/31/2024	5-6'	***3840***		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	***108***		<25.0	U	***108***	
		6-7'	336		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
AH-3	11/15/2024	0-0.5'	***4480***		<0.500	U	2.11		2.76		***55.9***		***60.7***		***2100***		***16300***		***2320***		***20720***	
		1'	***5120***		<0.500	U	1.53		2.52		45.3		49.4		***1760***		***14500***		***2310***		***18570***	
		2'	272		<0.050	U	<0.050	U	<0.050	U	<0.150	U	<0.300	U	<10.0		***237***		18.9		***255.9***	
TT-5	10/29/2024	0-0.5'	***1150***		<0.025	U	0.053		0.127		1.38		1.56		479		***3230***		622		***4330***	
		1'	368		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	73.3		<25.0	U	73.3	
		2'	48.0		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
		3'	48.0		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
TT-6	10/29/2024	0-0.5'	***3320***		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	***<25.0***	U	<25.0	U	***<25.0***	U
		1'	80.0		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
TT-7	10/29/2024	0-0.5'	***2240***		<0.100	U	1.08	U	2.09	U	20.6	U	23.8	U	3140		***13900***		2540		***19600***	
		1'	***3000***		<0.025	U	0.077		0.185		1.13		1.4		***434***		***4250***		***907***		***5590***	
		2'	***2320***		<0.025	U	0.09		0.202		0.643		0.935		***246***		***2640***		***559***		***3440***	
		3'	***1310***		<0.025	U	0.144		0.202		0.841		1.19		55.1		***531***		***108***		***694***	
		4'	***6600***		<0.025	U	0.515		0.748		3.74		5		***889***		***6240***		***1250***		***8380***	
		5'	288		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	64.8		<25.0	U	64.8	
		6'	***848***		<0.025	U	<0.050	U	<0.050	U	0.209		<0.275	U	28.5		***676***		***153***		***858***	
		7'	176		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	30.2		<25.0	U	30.2	
TT-8	10/29/2024	0-0.5'	***5360***		<0.025	U	<0.050	U	0.061		0.530		0.591		***247***		***2540***		***519***		***3310***	
		1'	***1840***		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	41.6		<25.0	U	41.6	
		2'	336		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
		4'	48		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
BOTTOM HOLE SAMPLES																								
PH-1	11/14/2024	12'	576		<0.050	U	<0.050	U	<0.050	U	<0.150	U	<0.300	U	<10.0	U	34		<10.0	U	34	
BH-2	11/21/2024	7'	64		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
HORIZONTAL DELINEATION SAMPLES																								
H-1.3	10/31/2024	0-1'	128		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
H-2.3	10/29/2024	0-1'	80.0		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
H-3.3	10/29/2024	0-1'	96.0		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
H-4.3	10/29/2024	0-1'	64.0		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
H-5.3	10/31/2024	0-1'	48.0		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
H-6.3	10/31/2024	0-1'	112		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
H-7.3	10/29/2024	0-1'	80.0		<0.025	U	<0.050	U	<0.050	U	<0.150	U	<0.275	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U
H-8.3	11/15/2024	0-1'	64.0		<0.050	U	<0.050	U	<0.050	U	<0.150	U	<0.300	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U
H-9.3	11/15/2024	0-1'	32.0		<0.050	U	<0.050	U	<0.050	U	<0.150	U	<0.300	U	<10.0	U	<10.0	U	<10.0	U	<10.0	U

NOTES:

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

Shaded intervals are proposed for excavation

Qualifiers:
B Compound was found in the blank and sample.
F1 MS and/or MSD recovery exceeds control limits.
J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U Indicates the analyte was analyzed for but not detected.

APPENDIX A
Regulatory Correspondence

From: Lincoln, Kennedy
To: Faught, John
Subject: Fw: Re: Re: [EXTERNAL] Request for Extension on Workplan Submittal: nAPP2420727981
Date: Tuesday, October 8, 2024 9:57:00 AM
Attachments: image001.png
Outlook-5a0cu3qe.png

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

Kennedy Lincoln
MCBU Environmental Specialist
Mid-Continent Business Unit (MCBU)
Chevron North America Exploration and Production Company
6301 Deauville Midland, TX
Mobile (432) 813-5384
Kennedy.Lincoln@chevron.com

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Tuesday, October 8, 2024 9:43:18 AM
To: Lincoln, Kennedy <Kennedy.Lincoln@chevron.com>
Subject: [**EXTERNAL**] Re: Re: [EXTERNAL] Request for Extension on Workplan Submittal: nAPP2420727981

Be aware this external email contains an attachment and/or link.
Ensure the email and contents are expected. If there are concerns, please submit suspicious messages to the Cyber Intelligence Center using the Report Phishing button.

Good morning Kennedy,

Thank you for your correspondence, assistance, and cooperation.

Your 60-day time extension request is approved (a little early). Remediation Due date has been updated to December 17, 2024.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Have a safe and productive day!

Regards,

Nelson Velez ● Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd

From: Lincoln, Kennedy <Kennedy.Lincoln@chevron.com>
Sent: Tuesday, September 24, 2024 12:54 PM
To: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Subject: RE: Re: [EXTERNAL] Request for Extension on Workplan Submittal: nAPP2420727981

> You don't often get email from kennedy.lincoln@chevron.com. Learn why this is important

Good afternoon Nelson,

Thank you for your quick response and I understand that the extension will not be granted until a week before the due date expiration. I would like to request a 60-day extension however we still plan to complete the remediation within the 30-day timeframe .

Thank you for your understanding and assistance.

Kennedy Lincoln
MCBU Environmental Specialist
Mid-Continent Business Unit (MCBU)
Chevron North America Exploration and Production Company
6301 Deauville Midland, TX
Mobile (432) 813-5384
Kennedy.Lincoln@chevron.com

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Tuesday, September 24, 2024 9:32 AM
To: Lincoln, Kennedy <Kennedy.Lincoln@chevron.com>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Subject: [**EXTERNAL**] Re: [EXTERNAL] Request for Extension on Workplan Submittal: nAPP2420727981

Good morning Kennedy,

Thank you for the correspondence. All three incidents are currently under my review (Robert Hamlet was the reviewer for incident # NAPP2414869489).

The incident in question has a remediation due date of October 18, 2024. I have flagged your email to response and approve your time extension within a week of due date expiration. Since the other two incidents due dates are 11/12 & 11/24/2024, I've surmised that your extension request would follow the same timeline (30-days). Please acknowledge if this is the case or you specifically requesting a longer period of time (60 or 90-days).

Have a safe and pleasant day!

Regards,

Nelson Velez ● Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd_

From: Lincoln, Kennedy <Kennedy.Lincoln@chevron.com>
Sent: Monday, September 23, 2024 5:22 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: [EXTERNAL] Request for Extension on Workplan Submittal: nAPP2420727981

Hello,

I am reaching out to request an extension for the workplan submittal for incident ID (n#) nAPP2420727981at Cicada 022H. The reason I am requesting an extension for this incident number is because we have three spills (nAPP2414869489, nAPP2420727981 and nAPP2424378052) on the same pad, and we would like to make a workplan that will allow the remediation of all areas to be done at the same time. We have currently delineated the impacted area for the first two spills and are planning to delineate the third spill next week.

Please let me know if you need any additional information to grant the extension.

Thanks,

Kennedy Lincoln
MCBU Environmental Specialist
Mid-Continent Business Unit (MCBU)
Chevron North America Exploration and Production Company
6301 Deauville Midland, TX
Mobile (432) 813-5384
Kennedy.Lincoln@chevron.com

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Monday, July 29, 2024 4:53 PM
To: Lincoln, Kennedy <Kennedy.Lincoln@chevron.com>
Subject: [**EXTERNAL**] The Oil Conservation Division (OCD) has approved the application, Application ID: 367199

To whom it may concern (c/o Kennedy Lincoln for CHEVRON U S A INC),
The OCD has approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2420727981, with the following conditions:

- **None**

The signed C-141 can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.
Thank you,
Nelson Velez
Environmental Specialist - Advanced
505-469-6146
Nelson.Velez@emnrd.nm.gov
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

From: Lincoln, Kennedy
To: Faught, John
Subject: Fw: [EXTERNAL] Re: The Oil Conservation Division (OCD) has approved the application, Application ID: 383687
Date: Wednesday, November 20, 2024 8:59:48 PM
Attachments: Outlook-fz4shnox.png

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

Hello John,

Below is the extension request confirmation.

Kennedy Lincoln
MCBU Environmental Specialist
Mid-Continent Business Unit (MCBU)
Chevron North America Exploration and Production Company
6301 Deauville Midland, TX
Mobile (432) 813-5384
Kennedy.Lincoln@chevron.com

From: Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Sent: Wednesday, November 20, 2024 1:44:23 PM
To: Lincoln, Kennedy <Kennedy.Lincoln@chevron.com>; ocdonline, emnrd, EMNRD <emnrd.ocdonline@emnrd.nm.gov>
Subject: [**EXTERNAL**] Re: [EXTERNAL] Re: The Oil Conservation Division (OCD) has approved the application, Application ID: 383687

Be aware this external email contains an attachment and/or link.
Ensure the email and contents are expected. If there are concerns, please submit suspicious messages to the Cyber Intelligence Center using the Report Phishing button.

Good afternoon Lincoln,

Thank you for the correspondence. Your 30-day time extension request is approved. Remediation Due date has been updated to December 30, 2024.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

The OCD requires a copy of all correspondence relative to remedial activities be included in all proposals and/or final closure reports. Correspondence required to be included in reports may include, but not limited to, notifications for liner inspections, sample events, spill/release/fire, and request for time extensions or variances.

Regards,

Nelson Velez ● Environmental Specialist - Adv
Environmental Bureau | EMNRD - Oil Conservation Division
1000 Rio Brazos Road | Aztec, NM 87410
(505) 469-6146 | nelson.velez@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd

From: Lincoln, Kennedy <Kennedy.Lincoln@chevron.com>
Sent: Wednesday, November 20, 2024 11:59 AM
To: ocdonline, emnrd, EMNRD <emnrd.ocdonline@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: [EXTERNAL] Re: The Oil Conservation Division (OCD) has approved the application, Application ID: 383687

Good afternoon,

We respectfully submit request for a work plan submittal extension of Incident # nAPP2424378052. This extension request is due to the need to remove on-site buried piping to safely complete delineation assessment activities within the area of release, which resulted in the delay of the assessment activities. Chevron requests a 30-day extension to complete assessment activities and workplan development.

Thank you for your time.

Kennedy Lincoln
MCBU Environmental Specialist
Mid-Continent Business Unit (MCBU)
Chevron North America Exploration and Production Company
6301 Deauville Midland, TX
Mobile (432) 813-5384
Kennedy.Lincoln@chevron.com

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>

Sent: Monday, September 16, 2024 12:19 PM
To: Lincoln, Kennedy <Kennedy.Lincoln@chevron.com>
Subject: [**EXTERNAL**] The Oil Conservation Division (OCD) has approved the application, Application ID: 383687

To whom it may concern (c/o Kennedy Lincoln for CHEVRON U S A INC),
The OCD has approved the submitted *Application for administrative approval of a release notification and corrective action* (C-141), for incident ID (n#) nAPP2424378052,
with the following conditions:

- **None**

The signed C-141 can be found in the OCD Online: Imaging under the incident ID (n#).

If you have any questions regarding this application, please contact me.
Thank you,
Nelson Velez
Environmental Specialist - Advanced
505-469-6146
Nelson.Velez@emnrd.nm.gov
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

APPENDIX B
Site Characterization Data

Site Characterization Summary

Site Information:
Chevron MCBU
Cicada Unit 022H
Eddy County, New Mexico
T25S, R27E, Section 35, Unit D
(32.093063°, -104.165862°)

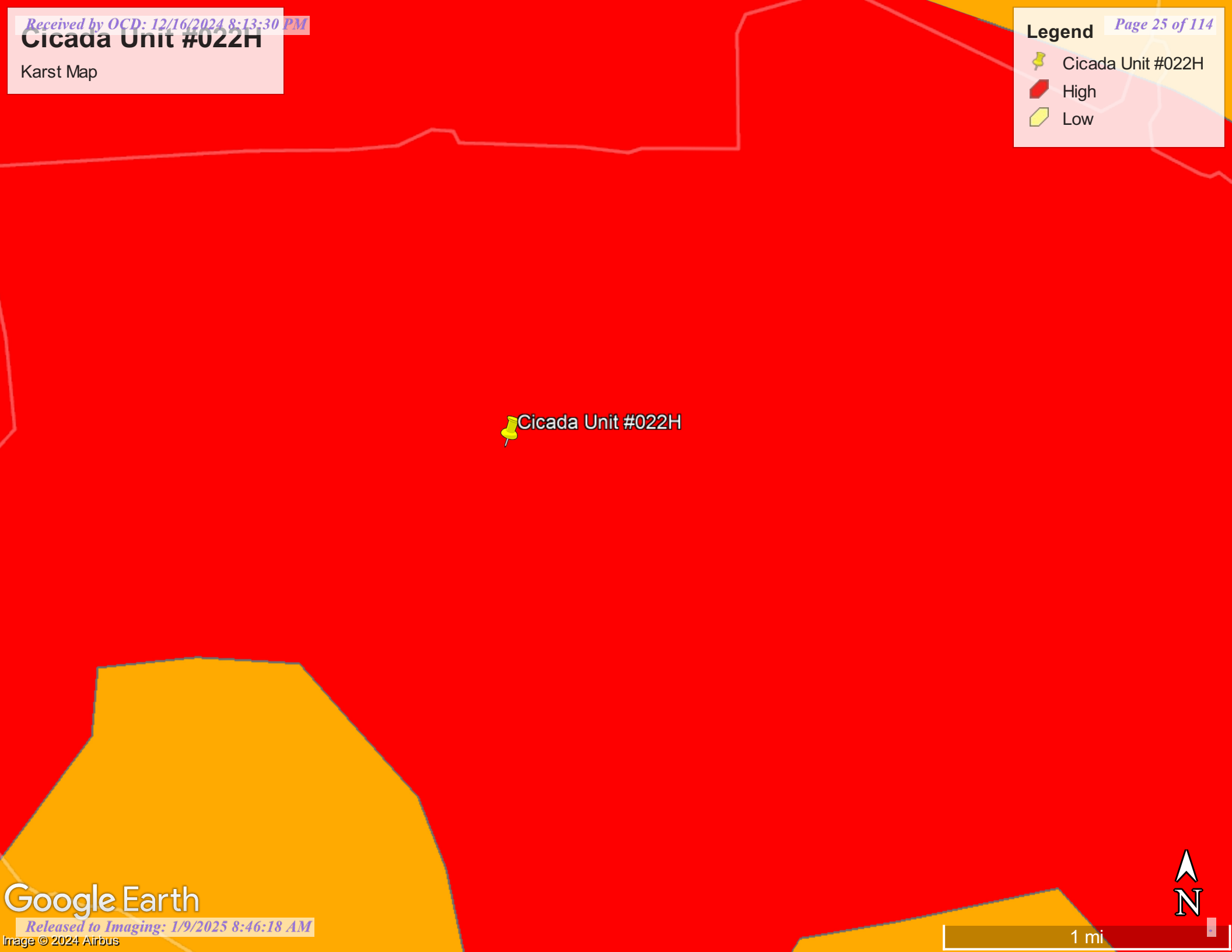
Site Characterization:
-High Karst
-No significant water features within specified distances
-Groundwater 69’ BGS 0.43 Miles Northeast. (NMOSE, POD C-04371-POD1, 2019 Sample)

RRALs:
-600 mg/kg Chlorides
-100 mg/kg Total TPH
-10 mg/kg Benzene
-50 mg/kg Total BTEX

Explanation:
Due to the Cicada Unit 022H location within a high karst area.

Cicada Unit #022H

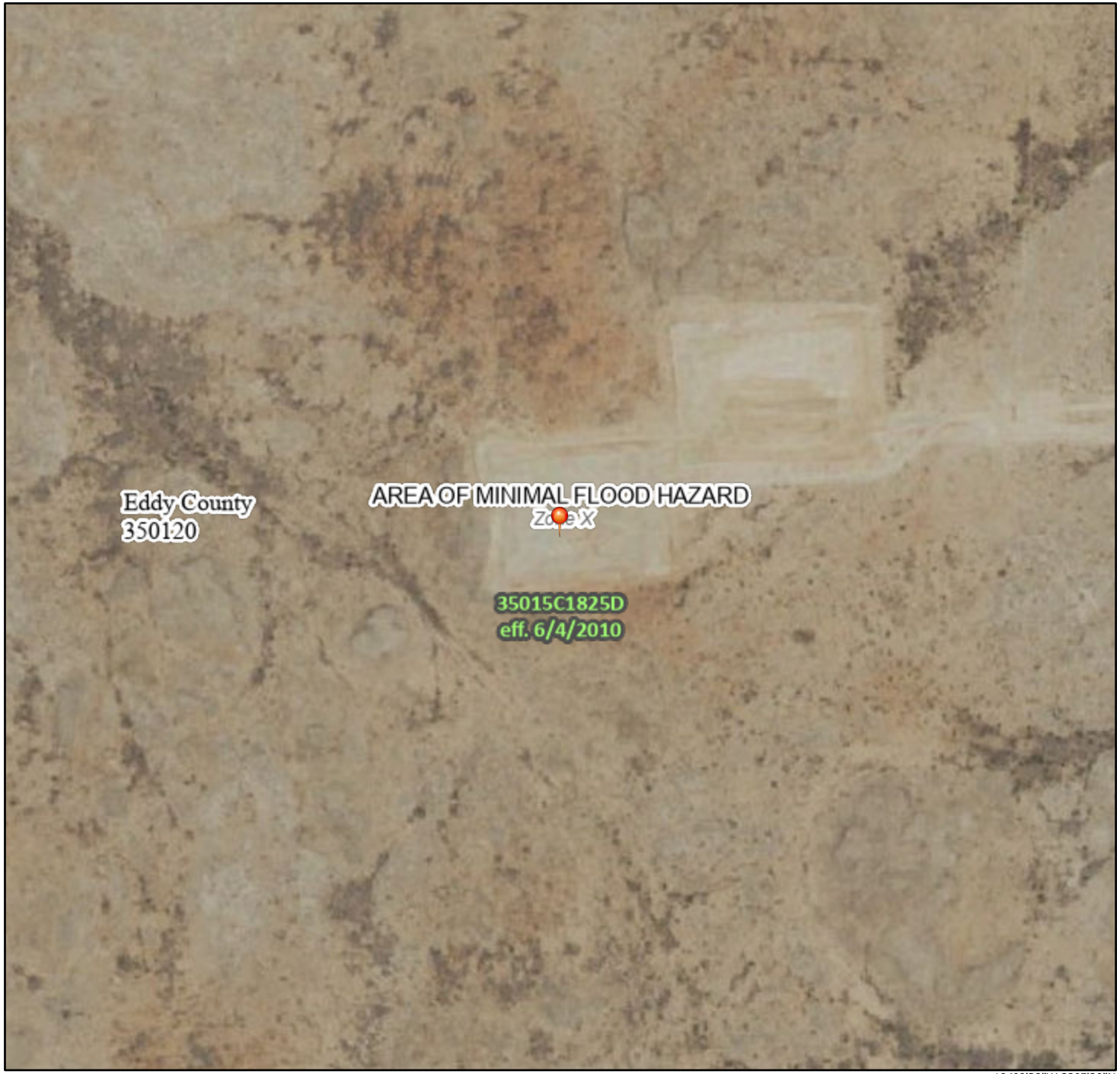
Karst Map



National Flood Hazard Layer FIRMette

FEMA

104°10'16"W 32°5'50"N



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

1:6,000

104°9'38"W 32°5'20"N

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 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 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 6/20/2024 at 4:34 PM 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.

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

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

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

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

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 04371 POD1	CUB	ED	3	3	4	26	25S	27E	579369	3551272	692	100	69	31

Average Depth to Water: **69 feet**

Minimum Depth: **69 feet**

Maximum Depth: **69 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 578711.206 **Northing (Y):** 3551054.94 **Radius:** 1600

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	Tws	Rng	X	Y
NA	C 04371 POD1	3	3	4	26	25S	27E	579369	3551272

Driller License: 1456 **Driller Company:** WHITE DRILLING COMPANY

Driller Name: WHITE, JOHNNOWN.GENER

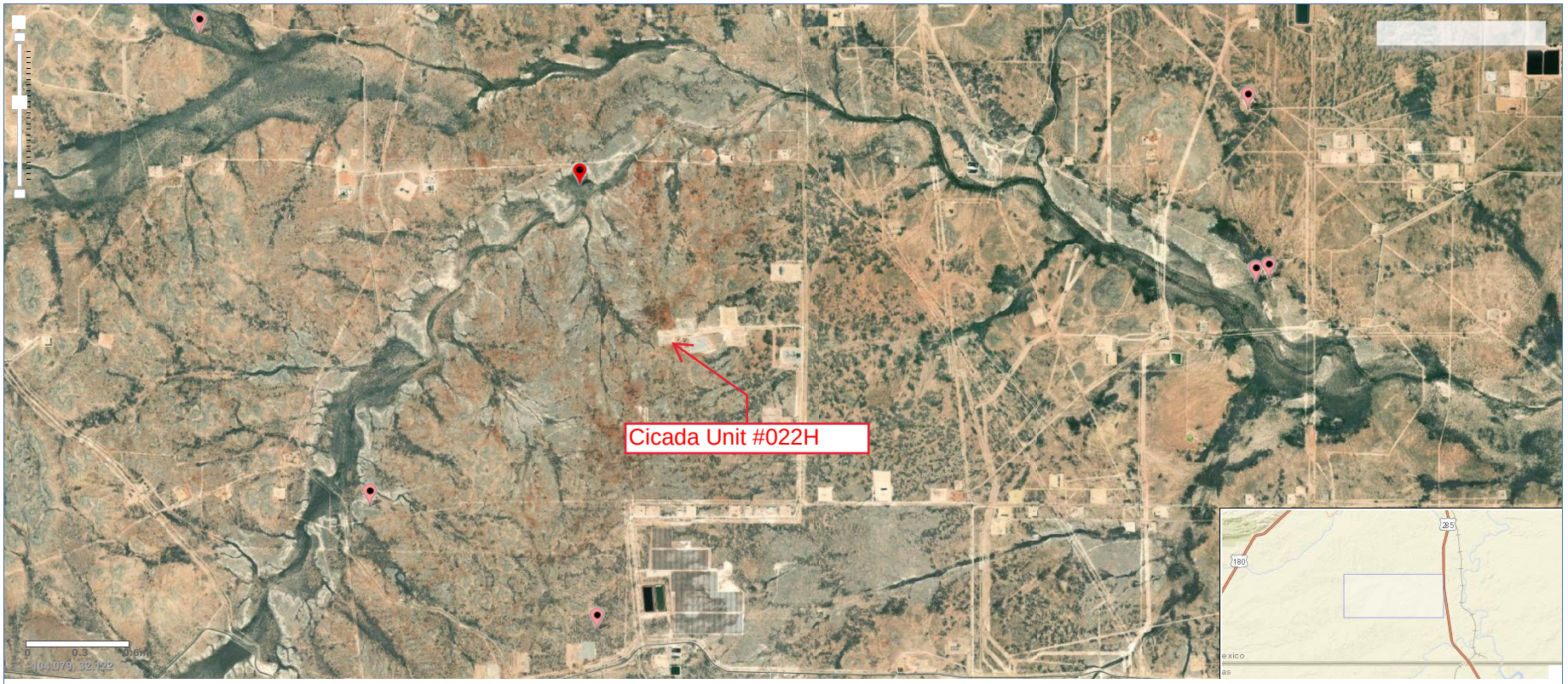
Drill Start Date:	10/17/2019	**Drill Finish Date:**	10/17/2019	**Plug Date:**	10/17/2019
Log File Date:	11/04/2019	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	100 feet	**Depth Water:**	69 feet

Water Bearing Stratifications:	Top	Bottom	Description
	5	100	Other/Unknown

USGS Home
Contact USGS
Search USGS

National Water Information System: Mapper

Help Info



Site Information

U.S. Fish and Wildlife Service
National Wetlands Inventory

Cicada Unit 022H

June 20, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

APPENDIX C
Photographic Documentation

Photographic Log

Chevron U.S.A., Inc.
Cicada Unit #22
nAPP2420727981 and nAPP2424378052

Photo 1: nAPP2420727981 release footprint aerial.

Photo 2: nAPP2420727981 release Point.

Photo 3: nAPP2424378052 release point.

Photo 4: nAPP2424378052 release footprint overview.

Photo 5: nAPP2424378052 release footprint aerial.

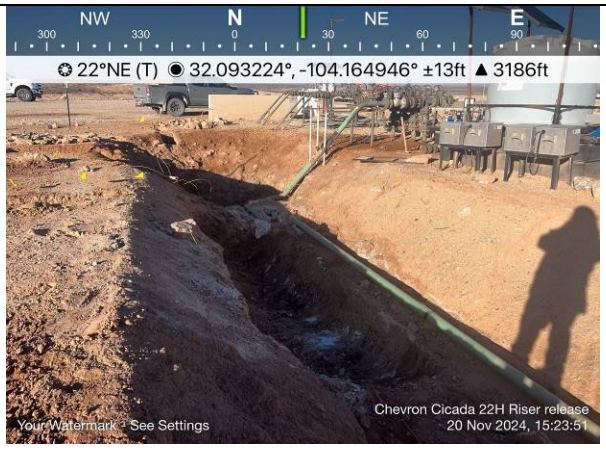


Photo 6: nAPP242378052 piping repair excavation area.

Job No.	Page No.	Client:	Site Name:	
212C-MD-03521	1 of 1	Chevron U.S.A, Inc	Cicada Unit #22	TETRA TECH

APPENDIX D
Laboratory Analytical Data

CARDINAL Laboratories

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

November 01, 2024

JOHN FAUGHT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: CICADA UNIT 022H RELEASE #3

Enclosed are the results of analyses for samples received by the laboratory on 10/31/24 14:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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
JOHN FAUGHT
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/31/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: AH - 1 (5-6') (H246630-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *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	**5600**	16.0	11/01/2024	ND	416	104	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	**410**	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	**98.0**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**508**	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *115 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *125 %* *41.9-170*

Cardinal Laboratories *=Accredited Analyte

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JOHN FAUGHT
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MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/31/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: AH - 1 (6-7') (H246630-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.4 %* *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	**1500**	16.0	11/01/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	**351**	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	**92.9**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**444**	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *125 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *136 %* *41.9-170*

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Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/31/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: AH - 1 (7-8') (H246630-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.9 %* *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	**624**	16.0	11/01/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	**26.0**	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	**26.0**	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *138 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *149 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/31/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: AH - 1 (8-9') R (H246630-04)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.4 %* *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	**1250**	16.0	11/01/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	**166**	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	**39.1**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**205**	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *135 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *145 %* *41.9-170*

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Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/31/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: AH - 2 (5-6') (H246630-05)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *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	**3840**	16.0	11/01/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	**108**	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	**108**	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *132 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *142 %* *41.9-170*

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MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/31/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: AH - 2 (6-7') (H246630-06)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.2 %* *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	**336**	16.0	11/01/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *113 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *119 %* *41.9-170*

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Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/31/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: H - 1.3 (0-1') (H246630-07)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.3 %* *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	**128**	16.0	11/01/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *127 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *134 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/31/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: H - 5.3 (0-1') (H246630-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.4 %* *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	**48.0**	16.0	11/01/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *125 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *134 %* *41.9-170*

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MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/31/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: H - 6.3 (0-1') (H246630-09)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.4 %* *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	**112**	16.0	11/01/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *128 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *136 %* *41.9-170*

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Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/30/2024
Reported:	11/01/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, TX		

Sample ID: SP - 1 (H246630-10)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	10/31/2024	ND	2.10	105	2.00	0.703	
Toluene*	<0.050	0.050	10/31/2024	ND	2.04	102	2.00	0.424	
Ethylbenzene*	<0.050	0.050	10/31/2024	ND	2.07	103	2.00	0.0780	
Total Xylenes*	<0.150	0.150	10/31/2024	ND	6.14	102	6.00	0.229	
Total BTEX	<0.275	0.275	10/31/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.0 %* *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	**304**	16.0	11/01/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	205	102	200	3.30	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.6	200	2.36	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	404	101	400	2.84	

Surrogate: 1-Chlorooctane *133 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *142 %* *41.9-170*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record

Page 1 of

Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland,Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: Chevron	**Site Manager:** John Faught
Project Name: Cicada Unit 022H Release #3	
Project Location: (county, state) Eddy County, TX	**Project #:** 212C-MD-03521
Invoice to: john.faught1@tetratech.com; OGA.ECS.AccountsPayable@tetratech.com	**Req # TBD**
Receiving Laboratory: Cardinal Laboratories	**Sampler Signature:**
Comments: Email: john.faught1@tetratech.com; clair.gonzales@tetratech.com	

ANALYSIS REQUEST
(Circle or Specify Method No.)

H246630 LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B / BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300 or SM 4500	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Hold
1	AH-1 (5-6')	10/31/2024			X				1		X		X												X				
2	AH-1 (6-7')	10/31/2024			X				1		X		X												X				
3	AH-1 (7-8')	10/31/2024			X				1		X		X												X				
4	AH-1 (8-9') R	10/31/2024			X				1		X		X												X				
5	AH-2 (5-6')	10/31/2024			X				1		X		X												X				
6	AH-2 (6-7')	10/31/2024			X				1		X		X												X				
7	H-1.3 (0-1')	10/31/2024			X				1		X		X												X				
8	H-5.3 (0-1')	10/31/2024			X				1		X		X												X				
9	H-6.3 (0-1')	10/31/2024			X				1		X		X												X				
10	SP-1	10/30/2024			X				1		X		X												X				

Relinquished by:	Date: 10/31/24	Time: 1415	Received by:
Relinquished by:	Date:	Time:	Received by: 10.31.24 1415
Relinquished by:	Date:	Time:	Received by:

LAB USE ONLY
Sample Temperature
3.0/3.0
CF-0.1
#140

REMARKS:

- [X] RUSH: Same Day **24 hr** 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

CARDINAL Laboratories

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

November 06, 2024

JOHN FAUGHT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: CICADA UNIT 022H RELEASE #3

Enclosed are the results of analyses for samples received by the laboratory on 10/31/24 14:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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
JOHN FAUGHT
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 5 (0-0.5') (H246631-01)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/04/2024	ND	1.98	99.2	2.00	10.9	
Toluene*	**0.053**	0.050	11/04/2024	ND	2.07	104	2.00	9.20	GC-NC1
Ethylbenzene*	**0.127**	0.050	11/04/2024	ND	2.03	102	2.00	8.07	GC-NC1
Total Xylenes*	**1.38**	0.150	11/04/2024	ND	6.48	108	6.00	6.88	
Total BTEX	**1.56**	0.275	11/04/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *160 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1150**	16.0	11/04/2024	ND	464	116	400	3.51	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	**479**	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**3230**	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	**622**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**4330**	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *120 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *102 %* *41.9-170*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 5 (1') (H246631-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/04/2024	ND	1.98	99.2	2.00	10.9	
Toluene*	<0.050	0.050	11/04/2024	ND	2.07	104	2.00	9.20	
Ethylbenzene*	<0.050	0.050	11/04/2024	ND	2.03	102	2.00	8.07	
Total Xylenes*	<0.150	0.150	11/04/2024	ND	6.48	108	6.00	6.88	
Total BTEX	<0.275	0.275	11/04/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	11/04/2024	ND	464	116	400	3.51	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**73.3**	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	**73.3**	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *94.8 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *90.5 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 5 (2') (H246631-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/04/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/04/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/04/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/04/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/04/2024	ND					

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

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	11/04/2024	ND	464	116	400	3.51	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *87.7 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *81.6 %* *41.9-170*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 5 (3') (H246631-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/04/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/04/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/04/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/04/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/04/2024	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	**48.0**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *98.3 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *92.3 %* *41.9-170*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 6 (0-0.5') (H246631-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/04/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/04/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/04/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/04/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/04/2024	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	**3320**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *95.7 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *88.5 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 6 (1') (H246631-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/04/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/04/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/04/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/04/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/04/2024	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	**80.0**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *80.6 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *73.3 %* *41.9-170*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 7 (0-0.5') (H246631-11)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	11/04/2024	ND	2.02	101	2.00	1.12	
Toluene*	**1.08**	0.200	11/04/2024	ND	1.96	98.2	2.00	2.56	GC-NC1
Ethylbenzene*	**2.09**	0.200	11/04/2024	ND	1.98	98.9	2.00	3.07	GC-NC1
Total Xylenes*	**20.6**	0.600	11/04/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	**23.8**	1.10	11/04/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *267 %* *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	**2240**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS S-06

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	**3140**	125	11/02/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**13900**	125	11/02/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	**2540**	125	11/02/2024	ND					
Total TPH C6-C35*	**19600**	125	11/02/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *415 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *263 %* *41.9-170*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 7 (1') (H246631-12)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	**0.077**	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	GC-NC1
Ethylbenzene*	**0.185**	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	GC-NC1
Total Xylenes*	**1.13**	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	**1.40**	0.275	11/03/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *169 %* *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	**3000**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	**434**	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**4250**	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	**907**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**5590**	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *116 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *107 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 7 (2') (H246631-13)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/04/2024	ND	2.02	101	2.00	1.12	
Toluene*	**0.090**	0.050	11/04/2024	ND	1.96	98.2	2.00	2.56	GC-NC1
Ethylbenzene*	**0.202**	0.050	11/04/2024	ND	1.98	98.9	2.00	3.07	GC-NC1
Total Xylenes*	**0.643**	0.150	11/04/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	**0.935**	0.275	11/04/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *182 %* *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	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	**246**	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**2640**	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	**559**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**3440**	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *105 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *102 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 7 (3') (H246631-14)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	**0.144**	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	GC-NC1
Ethylbenzene*	**0.202**	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	GC-NC1
Total Xylenes*	**0.841**	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	**1.19**	0.275	11/03/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *172 %* *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	**1310**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	**55.1**	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**531**	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	**108**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**694**	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *95.5 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *90.2 %* *41.9-170*

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Analytical Results For:

TETRA TECH
JOHN FAUGHT
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MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 7 (4') (H246631-15)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/04/2024	ND	2.02	101	2.00	1.12	
Toluene*	**0.515**	0.050	11/04/2024	ND	1.96	98.2	2.00	2.56	GC-NC1
Ethylbenzene*	**0.748**	0.050	11/04/2024	ND	1.98	98.9	2.00	3.07	GC-NC1
Total Xylenes*	**3.74**	0.150	11/04/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	**5.00**	0.275	11/04/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *370 %* *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	**6600**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	**889**	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**6240**	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	**1250**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**8380**	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *143 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *120 %* *41.9-170*

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Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 7 (5') (H246631-16)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	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	**288**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**64.8**	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	**64.8**	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *104 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *101 %* *41.9-170*

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Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 7 (6') (H246631-17)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	**0.209**	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	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	**848**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	**28.5**	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**676**	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	**153**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**858**	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *105 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *99.9 %* *41.9-170*

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Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 7 (7') (H246631-18)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	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	**176**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	190	94.9	200	1.07	
DRO >C12-C28	**30.2**	25.0	11/01/2024	ND	177	88.5	200	1.95	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	**30.2**	25.0	11/01/2024	ND	367	91.7	400	0.376	

Surrogate: 1-Chlorooctane *101 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *96.7 %* *41.9-170*

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MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 8 (0-0.5') (H246631-20)

BTEX 8021B mg/kg Analyzed By: JH S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	**0.061**	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	GC-NC1
Total Xylenes*	**0.530**	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	**0.591**	0.275	11/03/2024	ND					GC-NC1

Surrogate: 4-Bromofluorobenzene (PID *139 %* *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	**5360**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	**247**	25.0	11/01/2024	ND	181	90.3	200	8.41	
DRO >C12-C28	**2540**	25.0	11/01/2024	ND	199	99.7	200	9.01	QM-07
DRO >C28-C35	**519**	25.0	11/01/2024	ND					
Total TPH C6-C35*	**3310**	25.0	11/01/2024	ND	586	147	400	43.1	QM-07

Surrogate: 1-Chlorooctane *81.7 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *81.9 %* *41.9-170*

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Analytical Results For:

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 8 (1') (H246631-21)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	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	**1840**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	181	90.3	200	8.41	
DRO >C12-C28	**41.6**	25.0	11/01/2024	ND	199	99.7	200	9.01	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	**41.6**	25.0	11/01/2024	ND	586	147	400	43.1	

Surrogate: 1-Chlorooctane *88.2 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *84.9 %* *41.9-170*

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Fax To: (432) 682-3946

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 8 (2') (H246631-22)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.4 %* *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	**336**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	181	90.3	200	8.41	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.7	200	9.01	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	586	147	400	43.1	

Surrogate: 1-Chlorooctane *78.8 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *75.6 %* *41.9-170*

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Analytical Results For:

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: TT - 8 (4') (H246631-24)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	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	**48.0**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	181	90.3	200	8.41	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.7	200	9.01	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	586	147	400	43.1	

Surrogate: 1-Chlorooctane *75.8 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *73.5 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: H - 2.3 (0-1') (H246631-25)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *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	**80.0**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	181	90.3	200	8.41	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.7	200	9.01	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	586	147	400	43.1	

Surrogate: 1-Chlorooctane *76.0 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *71.9 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: H - 3.3 (0-1') (H246631-26)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	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	**96.0**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	181	90.3	200	8.41	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.7	200	9.01	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	586	147	400	43.1	

Surrogate: 1-Chlorooctane *77.4 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *73.3 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: H - 4.3 (0-1') (H246631-27)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	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	**64.0**	16.0	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	181	90.3	200	8.41	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.7	200	9.01	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	586	147	400	43.1	

Surrogate: 1-Chlorooctane *82.0 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *79.3 %* *41.9-170*

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

Received:	10/31/2024	Sampling Date:	10/29/2024
Reported:	11/06/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Tamara Oldaker
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: H - 7.3 (0-1') (H246631-28)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/03/2024	ND	2.02	101	2.00	1.12	
Toluene*	<0.050	0.050	11/03/2024	ND	1.96	98.2	2.00	2.56	
Ethylbenzene*	<0.050	0.050	11/03/2024	ND	1.98	98.9	2.00	3.07	
Total Xylenes*	<0.150	0.150	11/03/2024	ND	5.87	97.8	6.00	3.15	
Total BTEX	<0.275	0.275	11/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.8 %* *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	11/04/2024	ND	448	112	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/01/2024	ND	181	90.3	200	8.41	
DRO >C12-C28	<25.0	25.0	11/01/2024	ND	199	99.7	200	9.01	
DRO >C28-C35	<25.0	25.0	11/01/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/01/2024	ND	586	147	400	43.1	

Surrogate: 1-Chlorooctane *74.0 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *69.5 %* *41.9-170*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
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

Analysis Request of Chain of Custody Record

Page 1 of

Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland,Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: Chevron	**Site Manager:** John Faught
Project Name: Cicada Unit 022H Release #3	
Project Location: (county, state) Eddy County, TX	**Project #:** 212C-MD-03521
Invoice to: john.faught1@tetratech.com; OGA.ECS.AccountsPayable@tetratech.com	**Req # TBD**
Receiving Laboratory: Cardinal Laboratories	**Sampler Signature:**

Comments:
Email: john.faught1@tetratech.com; clair.gonzales@tetratech.com

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: DATE	TIME	MATRIX WATER	SOIL	PRESERVATIVE METHOD HCL	HNO_3	ICE		# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300 or SM 4500	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
H344631																																			
1	TT-5 (0-0.5')	10/29/2024			X					1		X			X												X								
2	TT-5 (1')	10/29/2024			X					1		X			X												X								
3	TT-5 (2')	10/29/2024			X					1		X			X												X								
4	TT-5 (3')	10/29/2024			X					1		X			X												X								
5	TT-5 (4')	10/29/2024			X					1		X			X												X								X
6	TT-6 (0-0.5')	10/29/2024			X					1		X			X												X								
7	TT-6 (1')	10/29/2024			X					1		X			X												X								
8	TT-6 (2')	10/29/2024			X					1		X			X												X								
9	TT-6 (3')	10/29/2024			X					1		X			X												X								X
10	TT-6 (4')	10/29/2024			X					1		X			X												X								X

Relinquished by: Matt Dye	Date: 10/31/24	Time: 1415	Received by: Tamara Oldaker
Relinquished by:	Date:	Time:	Received by: Date: 10.31.24 Time: 1415
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY
Sample Temperature
3.6/3.0
CF-0.6°C
#140

REMARKS: Hold samples pending results of previous interval. Run successively
standard

- ☐ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

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Analysis Request of Chain of Custody Record

Page 2 of

Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland,Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: Chevron	**Site Manager:** John Faught
Project Name: Cicada Unit 022H Release #3	
Project Location: (county, state) Eddy County, TX	**Project #:** 212C-MD-03521
Invoice to: john.faught1@tetratech.com; OGA.ECS.AccountsPayable@tetratech.com	**Req # TBD**
Receiving Laboratory: Cardinal Laboratories	**Sampler Signature:**
Comments: Email: john.faught1@tetratech.com; clair.gonzales@tetratech.com	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE HCL	PRESERVATIVE HNO_3	PRESERVATIVE ICE ✓	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.or SM 4500	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Hold
H246631																														
11	TT-7 (0-0.5')	10/29/2024			X				1		X			X												X				
12	TT-7 (1')	10/29/2024			X				1		X			X												X				
13	TT-7 (2')	10/29/2024			X				1		X			X												X				
14	TT-7 (3')	10/29/2024			X				1		X			X												X				
15	TT-7 (4')	10/29/2024			X				1		X			X												X				
16	TT-7 (5')	10/29/2024			X				1		X			X												X				
17	TT-7 (6')	10/29/2024			X				1		X			X												X				
18	TT-7 (7')	10/29/2024			X				1		X			X												X				
19	TT-7 (7-7.5')	10/29/2024			X				1		X			X												X				
20	TT-8 (0-0.5')	10/29/2024			X				1		X			X												X				X

Relinquished by:	Date: 10/31/24	Time: 1415	Received by:
Relinquished by:	Date:	Time:	Received by: Date: 10-31-24 Time: 1415
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY
Sample Temperature
36.1/30.1
CF-0.6°
#140

REMARKS: Hold samples pending results of previous interval. Run successively
Standard

- ☐ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

Page 3 of

Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland,Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: Chevron	**Site Manager:** John Faught
Project Name: Cicada Unit 022H Release #3	
Project Location: (county, state) Eddy County, TX	**Project #:** 212C-MD-03521
Invoice to: john.faught1@tetratech.com; OGA.ECS.AccountsPayable@tetratech.com	**Req # TBD**
Receiving Laboratory: Cardinal Laboratories	**Sampler Signature:**
Comments: Email: john.faught1@tetratech.com; clair.gonzales@tetratech.com	

H246631

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B / BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300 or SM 4500	Chloride / Sulfate / TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Hold
31	TT-8 (1')	10/29/2024			X				1		X		X												X				
32	TT-8 (2')	10/29/2024			X				1		X		X												X				
33	TT-8 (3')	10/29/2024			X				1		X		X												X				
34	TT-8 (4')	10/29/2024			X				1		X		X												X				X
35	H-2.3 (0-1')	10/29/2024			X				1		X		X												X				
36	H-3.3 (0-1')	10/29/2024			X				1		X		X												X				
37	H-4.3 (0-1')	10/29/2024			X				1		X		X												X				
38	H-7.3 (0-1')	10/29/2024			X				1		X		X												X				

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Matt Dye	10/31/24	1415	Jennifer Mathis		
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
				10-31-24	1415
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature
3.6 / 3.0
CF -0.6°
#140

REMARKS: Hold samples pending results of previous interval. Run successively Standard

- ☐ RUSH: Same Day 24 hr 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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CARDINAL Laboratories

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

November 08, 2024

JOHN FAUGHT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: CICADA UNIT 022H RELEASE #3

Enclosed are the results of analyses for samples received by the laboratory on 11/06/24 12:03.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 08-Nov-24 11:33

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH - 1 (9'-9.5')	H246756-01	Soil	05-Nov-24 00:00	06-Nov-24 12:03
AH - 1 (9.5'-10')	H246756-02	Soil	05-Nov-24 00:00	06-Nov-24 12:03
AH - 1 (10'-10.5')	H246756-03	Soil	05-Nov-24 00:00	06-Nov-24 12:03

11/08/24 - Client added analysis to sample -03 (see COC). This is the revised report and will replace the one sent on 11/07/24.

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: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 08-Nov-24 11:33

AH - 1 (9'-9.5')

H246756-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**1120**		16.0	mg/kg	4	4110634	AC	07-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*71.5-134*		*4110627*	JH	*06-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4110539	MS	06-Nov-24	8015B	
DRO >C10-C28*	**375**		10.0	mg/kg	1	4110539	MS	06-Nov-24	8015B	
EXT DRO >C28-C36	**66.7**		10.0	mg/kg	1	4110539	MS	06-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*114 %*	*48.2-134*		*4110539*	MS	*06-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*117 %*	*49.1-148*		*4110539*	MS	*06-Nov-24*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 08-Nov-24 11:33

AH - 1 (9.5'-10')

H246756-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**848**		16.0	mg/kg	4	4110634	AC	07-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4110627	JH	06-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*108 %*	*71.5-134*		*4110627*	JH	*06-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4110539	MS	06-Nov-24	8015B	
DRO >C10-C28*	**512**		10.0	mg/kg	1	4110539	MS	06-Nov-24	8015B	
EXT DRO >C28-C36	**89.2**		10.0	mg/kg	1	4110539	MS	06-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*107 %*	*48.2-134*		*4110539*	MS	*06-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*104 %*	*49.1-148*		*4110539*	MS	*06-Nov-24*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 08-Nov-24 11:33

AH - 1 (10'-10.5')

H246756-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**832**		16.0	mg/kg	4	4110819	CT	08-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4110718	JH	07-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4110718	JH	07-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4110718	JH	07-Nov-24	8021B	
Total Xylenes*	**0.282**		0.150	mg/kg	50	4110718	JH	07-Nov-24	8021B	GC-NC1
Total BTEX	<0.300		0.300	mg/kg	50	4110718	JH	07-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*111 %*	*71.5-134*		*4110718*	JH	*07-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4110717	MS	07-Nov-24	8015B	
DRO >C10-C28*	**476**		10.0	mg/kg	1	4110717	MS	07-Nov-24	8015B	
EXT DRO >C28-C36	**83.0**		10.0	mg/kg	1	4110717	MS	07-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*107 %*	*48.2-134*		*4110717*	MS	*07-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*114 %*	*49.1-148*		*4110717*	MS	*07-Nov-24*	*8015B*	

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CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 08-Nov-24 11:33

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4110634 - 1:4 DI Water										
Blank (4110634-BLK1)				Prepared & Analyzed: 06-Nov-24						
Chloride	ND	16.0	mg/kg							
LCS (4110634-BS1)				Prepared & Analyzed: 06-Nov-24						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4110634-BSD1)				Prepared & Analyzed: 06-Nov-24						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	
Batch 4110819 - 1:4 DI Water										
Blank (4110819-BLK1)				Prepared & Analyzed: 08-Nov-24						
Chloride	ND	16.0	mg/kg							
LCS (4110819-BS1)				Prepared & Analyzed: 08-Nov-24						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4110819-BSD1)				Prepared & Analyzed: 08-Nov-24						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 08-Nov-24 11:33

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 4110627 - Volatiles										
Blank (4110627-BLK1)				Prepared & Analyzed: 06-Nov-24						
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)	*0.0521*		mg/kg	*0.0500*		*104*	*71.5-134*			
LCS (4110627-BS1)				Prepared & Analyzed: 06-Nov-24						
Benzene	2.07	0.050	mg/kg	2.00		103	82.8-130			
Toluene	2.11	0.050	mg/kg	2.00		105	86-128			
Ethylbenzene	2.11	0.050	mg/kg	2.00		106	85.9-128			
m,p-Xylene	4.22	0.100	mg/kg	4.00		106	89-129			
o-Xylene	2.04	0.050	mg/kg	2.00		102	86.1-125			
Total Xylenes	6.26	0.150	mg/kg	6.00		104	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0521*		mg/kg	*0.0500*		*104*	*71.5-134*			
LCS Dup (4110627-BSD1)				Prepared & Analyzed: 06-Nov-24						
Benzene	2.09	0.050	mg/kg	2.00		105	82.8-130	1.13	15.8	
Toluene	2.13	0.050	mg/kg	2.00		107	86-128	1.30	15.9	
Ethylbenzene	2.13	0.050	mg/kg	2.00		106	85.9-128	0.716	16	
m,p-Xylene	4.26	0.100	mg/kg	4.00		106	89-129	0.797	16.2	
o-Xylene	2.05	0.050	mg/kg	2.00		103	86.1-125	0.750	16.7	
Total Xylenes	6.31	0.150	mg/kg	6.00		105	88.2-128	0.782	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0510*		mg/kg	*0.0500*		*102*	*71.5-134*			
Batch 4110718 - Volatiles										
Blank (4110718-BLK1)				Prepared & Analyzed: 07-Nov-24						
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							

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 08-Nov-24 11:33

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 4110718 - Volatiles										
Blank (4110718-BLK1)				Prepared & Analyzed: 07-Nov-24						
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*96.2*	*71.5-134*			
LCS (4110718-BS1)				Prepared & Analyzed: 07-Nov-24						
Benzene	2.04	0.050	mg/kg	2.00		102	82.8-130			
Toluene	2.01	0.050	mg/kg	2.00		100	86-128			
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	85.9-128			
m,p-Xylene	4.08	0.100	mg/kg	4.00		102	89-129			
o-Xylene	1.99	0.050	mg/kg	2.00		99.7	86.1-125			
Total Xylenes	6.07	0.150	mg/kg	6.00		101	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0481*		mg/kg	*0.0500*		*96.1*	*71.5-134*			
LCS Dup (4110718-BSD1)				Prepared & Analyzed: 07-Nov-24						
Benzene	2.22	0.050	mg/kg	2.00		111	82.8-130	8.56	15.8	
Toluene	2.15	0.050	mg/kg	2.00		108	86-128	6.98	15.9	
Ethylbenzene	2.16	0.050	mg/kg	2.00		108	85.9-128	5.67	16	
m,p-Xylene	4.31	0.100	mg/kg	4.00		108	89-129	5.62	16.2	
o-Xylene	2.10	0.050	mg/kg	2.00		105	86.1-125	4.93	16.7	
Total Xylenes	6.41	0.150	mg/kg	6.00		107	88.2-128	5.39	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0482*		mg/kg	*0.0500*		*96.5*	*71.5-134*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 08-Nov-24 11:33

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 4110539 - General Prep - Organics										
Blank (4110539-BLK1)				Prepared: 05-Nov-24 Analyzed: 06-Nov-24						
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	*56.4*		mg/kg	*50.0*		*113*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*48.8*		mg/kg	*50.0*		*97.6*	*49.1-148*			
LCS (4110539-BS1)				Prepared: 05-Nov-24 Analyzed: 06-Nov-24						
GRO C6-C10	200	10.0	mg/kg	200		99.8	81.5-123			
DRO >C10-C28	195	10.0	mg/kg	200		97.6	77.7-122			
Total TPH C6-C28	395	10.0	mg/kg	400		98.7	80.9-121			
Surrogate: 1-Chlorooctane	*66.3*		mg/kg	*50.0*		*133*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*59.6*		mg/kg	*50.0*		*119*	*49.1-148*			
LCS Dup (4110539-BSD1)				Prepared: 05-Nov-24 Analyzed: 06-Nov-24						
GRO C6-C10	200	10.0	mg/kg	200		99.8	81.5-123	0.00451	13	
DRO >C10-C28	196	10.0	mg/kg	200		97.9	77.7-122	0.257	15.6	
Total TPH C6-C28	395	10.0	mg/kg	400		98.9	80.9-121	0.129	18.5	
Surrogate: 1-Chlorooctane	*65.8*		mg/kg	*50.0*		*132*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*58.4*		mg/kg	*50.0*		*117*	*49.1-148*			
Batch 4110717 - General Prep - Organics										
Blank (4110717-BLK1)				Prepared & Analyzed: 07-Nov-24						
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	*49.1*		mg/kg	*50.0*		*98.1*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.5*	*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 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 08-Nov-24 11:33

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 4110717 - General Prep - Organics										
LCS (4110717-BS1)				Prepared & Analyzed: 07-Nov-24						
GRO C6-C10	200	10.0	mg/kg	200		100	81.5-123			
DRO >C10-C28	193	10.0	mg/kg	200		96.3	77.7-122			
Total TPH C6-C28	392	10.0	mg/kg	400		98.1	80.9-121			
Surrogate: 1-Chlorooctane	*56.1*		mg/kg	*50.0*		*112*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*56.4*		mg/kg	*50.0*		*113*	*49.1-148*			
LCS Dup (4110717-BSD1)				Prepared & Analyzed: 07-Nov-24						
GRO C6-C10	206	10.0	mg/kg	200		103	81.5-123	3.01	13	
DRO >C10-C28	200	10.0	mg/kg	200		99.9	77.7-122	3.69	15.6	
Total TPH C6-C28	406	10.0	mg/kg	400		101	80.9-121	3.35	18.5	
Surrogate: 1-Chlorooctane	*55.2*		mg/kg	*50.0*		*110*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*53.9*		mg/kg	*50.0*		*108*	*49.1-148*			

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
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

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	Chevron	**Site Manager:**	John Faught
Project Name:	Cicada Unit 022H Release #3	**Contact Info:**	
Project Location: (county, state)	Eddy County, NM	**Project #:**	212C-MD-03521
Invoice to:	John.faught1@tetratech.com; OGA.ECS.AccountsPayable@tetratech.com		Req # TBD
Receiving Laboratory:	Cardinal Laboratories	**Sampler Signature:**	Matthew Castrejon
Comments:	Email: john.faught1@tetratech.com; clair.gonzales@tetratech.com		

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH 8015M (GRO - DRO - ORO - MRO)	Chloride 300 or SM 4500	•Nitrate / Nitrite / Bromide / Chloride / Flouride / Sulfate	•RSK-175	•TDS	•Total ICP Metals: As, Ba, B, Cd, Ca, Cr, Fe, Pb, Mg, Mn, K, S	•Total Coliform, Sulfate Reducing Bacteria, Iron Reducing Ba	•Total Phosphorus	•TPH – TX 1005 (C6-C35)	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	HOLD
H246750																															
1	AH-1 (9'-9.5')	11/05/24			x			x		1	N	x	x	x																	
2	AH-1 (9.5'-10')	11/05/24			x			x		1	N	x	x	x																	
3	AH-1 (10'-10.5')	11/05/24			x			x		1	N	x	x	x																	
																															X

Hold Samples 11/7/24

Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

10/6/24 1203

11/6/24 1203

ORIGINAL COPY

LAB USE ONLY

Sample Temperature 2.6)c-0.4 = 2.0 : #140

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

CARDINAL Laboratories

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

November 21, 2024

JOHN FAUGHT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: CICADA UNIT 022H RELEASE #3

Enclosed are the results of analyses for samples received by the laboratory on 11/15/24 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PH - 1 (11')	H246987-01	Soil	14-Nov-24 00:00	15-Nov-24 13:45
PH - 1 (12')	H246987-02	Soil	14-Nov-24 00:00	15-Nov-24 13:45
H-8.3 (0-1')	H246987-03	Soil	15-Nov-24 00:00	15-Nov-24 13:45
H-9.3 (0-1')	H246987-04	Soil	15-Nov-24 00:00	15-Nov-24 13:45
AH - 3 (0-0.5')	H246987-05	Soil	15-Nov-24 00:00	15-Nov-24 13:45
AH - 3 (1')	H246987-06	Soil	15-Nov-24 00:00	15-Nov-24 13:45
AH - .3 (2')	H246987-07	Soil	15-Nov-24 00:00	15-Nov-24 13:45

11/19/24 - Client added analysis to sample -02 (see COC). This is the revised report and will replace the one sent on 11/18/24.

11/21/24 - Client asked to rerun sample -02 for TPH. Re-extract analysis came out lower than the original. The sample was not very homogenous and had a lot of rocks. Sample was homogenized and re-extracted. This is the revised report and will replace the one sent on 11/19/24.

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

PH - 1 (11')

H246987-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**624**		16.0	mg/kg	4	4111819	AC	18-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*96.4 %*	*71.5-134*		*4111454*	JH	*15-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111512	MS	15-Nov-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4111512	MS	15-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4111512	MS	15-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*76.0 %*	*48.2-134*		*4111512*	MS	*15-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*81.3 %*	*49.1-148*		*4111512*	MS	*15-Nov-24*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

PH - 1 (12')

H246987-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**576**		16.0	mg/kg	4	4111918	AC	19-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111816	JH	18-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111816	JH	18-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111816	JH	18-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111816	JH	18-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111816	JH	18-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*96.9 %*	*71.5-134*		*4111816*	JH	*18-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111831	MS	20-Nov-24	8015B	
DRO >C10-C28*	**34.0**		10.0	mg/kg	1	4111831	MS	20-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4111831	MS	20-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*70.1 %*	*48.2-134*		*4111831*	MS	*20-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*69.5 %*	*49.1-148*		*4111831*	MS	*20-Nov-24*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

H-8.3 (0-1')

H246987-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	4111824	CT	18-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*71.5-134*		*4111454*	JH	*15-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111512	MS	15-Nov-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4111512	MS	15-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4111512	MS	15-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*85.4 %*	*48.2-134*		*4111512*	MS	*15-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*90.8 %*	*49.1-148*		*4111512*	MS	*15-Nov-24*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

H-9.3 (0-1')

H246987-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	4111824	CT	18-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*71.5-134*		*4111454*	JH	*15-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111512	MS	15-Nov-24	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	4111512	MS	15-Nov-24	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	4111512	MS	15-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*72.3 %*	*48.2-134*		*4111512*	MS	*15-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*74.4 %*	*49.1-148*		*4111512*	MS	*15-Nov-24*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

AH - 3 (0-0.5')

H246987-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**4480**		16.0	mg/kg	4	4111824	CT	18-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										**S-04**
Benzene*	<0.500		0.500	mg/kg	500	4111454	JH	15-Nov-24	8021B	GC-NC
Toluene*	**2.11**		0.500	mg/kg	500	4111454	JH	15-Nov-24	8021B	GC-NC1
Ethylbenzene*	**2.76**		0.500	mg/kg	500	4111454	JH	15-Nov-24	8021B	GC-NC1
Total Xylenes*	**55.9**		1.50	mg/kg	500	4111454	JH	15-Nov-24	8021B	
Total BTEX	**60.7**		3.00	mg/kg	500	4111454	JH	15-Nov-24	8021B	GC-NC1
Surrogate: 4-Bromofluorobenzene (PID)			*158 %*	*71.5-134*		*4111454*	JH	*15-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-06**
GRO C6-C10*	**2100**		100	mg/kg	10	4111512	MS	18-Nov-24	8015B	
DRO >C10-C28*	**16300**		100	mg/kg	10	4111512	MS	18-Nov-24	8015B	
EXT DRO >C28-C36	**2320**		100	mg/kg	10	4111512	MS	18-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*609 %*	*48.2-134*		*4111512*	MS	*18-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*278 %*	*49.1-148*		*4111512*	MS	*18-Nov-24*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

AH - 3 (1')

H246987-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**5120**		16.0	mg/kg	4	4111824	CT	18-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										**S-04**
Benzene*	<0.500		0.500	mg/kg	500	4111454	JH	15-Nov-24	8021B	GC-NC
Toluene*	**1.53**		0.500	mg/kg	500	4111454	JH	15-Nov-24	8021B	GC-NC1
Ethylbenzene*	**2.52**		0.500	mg/kg	500	4111454	JH	15-Nov-24	8021B	GC-NC1
Total Xylenes*	**45.3**		1.50	mg/kg	500	4111454	JH	15-Nov-24	8021B	
Total BTEX	**49.4**		3.00	mg/kg	500	4111454	JH	15-Nov-24	8021B	GC-NC1
Surrogate: 4-Bromofluorobenzene (PID)			*140 %*	*71.5-134*		*4111454*	JH	*15-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										**S-06**
GRO C6-C10*	**1760**		100	mg/kg	10	4111512	MS	18-Nov-24	8015B	
DRO >C10-C28*	**14500**		100	mg/kg	10	4111512	MS	18-Nov-24	8015B	
EXT DRO >C28-C36	**2310**		100	mg/kg	10	4111512	MS	18-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*450 %*	*48.2-134*		*4111512*	MS	*18-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*288 %*	*49.1-148*		*4111512*	MS	*18-Nov-24*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

AH - .3 (2')

H246987-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**272**		16.0	mg/kg	4	4111824	CT	18-Nov-24	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Toluene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	4111454	JH	15-Nov-24	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*71.5-134*		*4111454*	JH	*15-Nov-24*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	4111512	MS	18-Nov-24	8015B	
DRO >C10-C28*	**237**		10.0	mg/kg	1	4111512	MS	18-Nov-24	8015B	
EXT DRO >C28-C36	**18.9**		10.0	mg/kg	1	4111512	MS	18-Nov-24	8015B	
Surrogate: 1-Chlorooctane			*73.6 %*	*48.2-134*		*4111512*	MS	*18-Nov-24*	*8015B*	
Surrogate: 1-Chlorooctadecane			*81.0 %*	*49.1-148*		*4111512*	MS	*18-Nov-24*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111819 - 1:4 DI Water										
Blank (4111819-BLK1)				Prepared & Analyzed: 18-Nov-24						
Chloride	ND	16.0	mg/kg							
LCS (4111819-BS1)				Prepared & Analyzed: 18-Nov-24						
Chloride	480	16.0	mg/kg	400		120	80-120			
LCS Dup (4111819-BSD1)				Prepared & Analyzed: 18-Nov-24						
Chloride	464	16.0	mg/kg	400		116	80-120	3.39	20	
Batch 4111824 - 1:4 DI Water										
Blank (4111824-BLK1)				Prepared & Analyzed: 18-Nov-24						
Chloride	ND	16.0	mg/kg							
LCS (4111824-BS1)				Prepared & Analyzed: 18-Nov-24						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4111824-BSD1)				Prepared & Analyzed: 18-Nov-24						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	
Batch 4111918 - 1:4 DI Water										
Blank (4111918-BLK1)				Prepared & Analyzed: 19-Nov-24						
Chloride	ND	16.0	mg/kg							
LCS (4111918-BS1)				Prepared & Analyzed: 19-Nov-24						
Chloride	400	16.0	mg/kg	400		100	80-120			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111918 - 1:4 DI Water										
LCS Dup (4111918-BSD1)				Prepared & Analyzed: 19-Nov-24						
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

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CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

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 4111454 - Volatiles										
Blank (4111454-BLK1)				Prepared: 14-Nov-24 Analyzed: 15-Nov-24						
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)	*0.0511*		mg/kg	*0.0500*		*102*	*71.5-134*			
LCS (4111454-BS1)				Prepared: 14-Nov-24 Analyzed: 15-Nov-24						
Benzene	2.10	0.050	mg/kg	2.00		105	82.8-130			
Toluene	2.31	0.050	mg/kg	2.00		116	86-128			
Ethylbenzene	2.58	0.050	mg/kg	2.00		129	85.9-128			BS-3
m,p-Xylene	5.24	0.100	mg/kg	4.00		131	89-129			BS1
o-Xylene	2.59	0.050	mg/kg	2.00		129	86.1-125			BS-3
Total Xylenes	7.83	0.150	mg/kg	6.00		130	88.2-128			BS-3
Surrogate: 4-Bromofluorobenzene (PID)	*0.0605*		mg/kg	*0.0500*		*121*	*71.5-134*			
LCS Dup (4111454-BSD1)				Prepared: 14-Nov-24 Analyzed: 15-Nov-24						
Benzene	2.03	0.050	mg/kg	2.00		101	82.8-130	3.19	15.8	
Toluene	2.07	0.050	mg/kg	2.00		103	86-128	11.1	15.9	
Ethylbenzene	2.24	0.050	mg/kg	2.00		112	85.9-128	13.9	16	
m,p-Xylene	4.52	0.100	mg/kg	4.00		113	89-129	14.9	16.2	
o-Xylene	2.24	0.050	mg/kg	2.00		112	86.1-125	14.6	16.7	
Total Xylenes	6.75	0.150	mg/kg	6.00		113	88.2-128	14.8	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0541*		mg/kg	*0.0500*		*108*	*71.5-134*			
Batch 4111816 - Volatiles										
Blank (4111816-BLK1)				Prepared & Analyzed: 18-Nov-24						
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: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

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 4111816 - Volatiles										
Blank (4111816-BLK1)				Prepared & Analyzed: 18-Nov-24						
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0534*		mg/kg	*0.0500*		*107*	*71.5-134*			
LCS (4111816-BS1)				Prepared & Analyzed: 18-Nov-24						
Benzene	2.14	0.050	mg/kg	2.00		107	82.8-130			
Toluene	2.13	0.050	mg/kg	2.00		106	86-128			
Ethylbenzene	2.26	0.050	mg/kg	2.00		113	85.9-128			
m,p-Xylene	4.56	0.100	mg/kg	4.00		114	89-129			
o-Xylene	2.25	0.050	mg/kg	2.00		112	86.1-125			
Total Xylenes	6.81	0.150	mg/kg	6.00		113	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0511*		mg/kg	*0.0500*		*102*	*71.5-134*			
LCS Dup (4111816-BSD1)				Prepared & Analyzed: 18-Nov-24						
Benzene	2.10	0.050	mg/kg	2.00		105	82.8-130	2.28	15.8	
Toluene	2.23	0.050	mg/kg	2.00		112	86-128	4.86	15.9	
Ethylbenzene	2.46	0.050	mg/kg	2.00		123	85.9-128	8.60	16	
m,p-Xylene	5.02	0.100	mg/kg	4.00		125	89-129	9.50	16.2	
o-Xylene	2.47	0.050	mg/kg	2.00		124	86.1-125	9.50	16.7	
Total Xylenes	7.49	0.150	mg/kg	6.00		125	88.2-128	9.50	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0555*		mg/kg	*0.0500*		*111*	*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: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

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 4111512 - General Prep - Organics										
Blank (4111512-BLK1)				Prepared & Analyzed: 15-Nov-24						
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	*50.1*		mg/kg	*50.0*		*100*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*53.5*		mg/kg	*50.0*		*107*	*49.1-148*			
LCS (4111512-BS1)				Prepared & Analyzed: 15-Nov-24						
GRO C6-C10	212	10.0	mg/kg	200		106	81.5-123			
DRO >C10-C28	196	10.0	mg/kg	200		97.8	77.7-122			
Total TPH C6-C28	408	10.0	mg/kg	400		102	80.9-121			
Surrogate: 1-Chlorooctane	*56.0*		mg/kg	*50.0*		*112*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*58.0*		mg/kg	*50.0*		*116*	*49.1-148*			
LCS Dup (4111512-BSD1)				Prepared & Analyzed: 15-Nov-24						
GRO C6-C10	208	10.0	mg/kg	200		104	81.5-123	2.11	13	
DRO >C10-C28	192	10.0	mg/kg	200		95.9	77.7-122	1.98	15.6	
Total TPH C6-C28	400	10.0	mg/kg	400		99.9	80.9-121	2.05	18.5	
Surrogate: 1-Chlorooctane	*51.2*		mg/kg	*50.0*		*102*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*53.7*		mg/kg	*50.0*		*107*	*49.1-148*			
Batch 4111831 - General Prep - Organics										
Blank (4111831-BLK1)				Prepared & Analyzed: 18-Nov-24						
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	*47.4*		mg/kg	*50.0*		*94.8*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*47.6*		mg/kg	*50.0*		*95.1*	*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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: CICADA UNIT 022H RELEASE #3 Project Number: 212C-MD-03521 Project Manager: JOHN FAUGHT Fax To: (432) 682-3946	Reported: 21-Nov-24 12:10

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 4111831 - General Prep - Organics										
LCS (4111831-BS1)				Prepared & Analyzed: 18-Nov-24						
GRO C6-C10	191	10.0	mg/kg	200		95.7	81.5-123			
DRO >C10-C28	191	10.0	mg/kg	200		95.5	77.7-122			
Total TPH C6-C28	382	10.0	mg/kg	400		95.6	80.9-121			
Surrogate: 1-Chlorooctane	*51.1*		mg/kg	*50.0*		*102*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*49.4*		mg/kg	*50.0*		*98.8*	*49.1-148*			
LCS Dup (4111831-BSD1)				Prepared & Analyzed: 18-Nov-24						
GRO C6-C10	206	10.0	mg/kg	200		103	81.5-123	7.39	13	
DRO >C10-C28	205	10.0	mg/kg	200		103	77.7-122	7.06	15.6	
Total TPH C6-C28	411	10.0	mg/kg	400		103	80.9-121	7.23	18.5	
Surrogate: 1-Chlorooctane	*56.5*		mg/kg	*50.0*		*113*	*48.2-134*			
Surrogate: 1-Chlorooctadecane	*55.8*		mg/kg	*50.0*		*112*	*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-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GC-NC1	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are biased high with interfering compounds.
GC-NC	8260 confirmation analysis was performed; initial GC results were not supported by GC/MS analysis and are reported as ND.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
BS1	Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
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

Analysis Request of Chain of Custody Record

Page 1 of

Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name:	Chevron	**Site Manager:**	John Faught
Project Name:	Cicada Unit 022H Release #3		
Project Location: (county, state)	Eddy County, TX	**Project #:**	212C-MD-03521
Invoice to:	john.faught1@tetratech.com; OGA.ECS.AccountsPayable@tetratech.com	**Req # TBD**	
Receiving Laboratory:	Cardinal Laboratories	**Sampler Signature:**	

Comments:

Email: john.faught1@tetratech.com; clair.gonzales@tetratech.com

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300 or SM 4500	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance		Cl, TPH, BTEX added 11-18-24 SC		Hold
H244987																																				
1	PH-1 (11')	11/14/2024			X				X			1		X		X													X							
2	PH-1 (12')	11/14/2024			X				X			1		X		X													X					X		X
3	H-8.3 (0-1')	11/15/2024			X				X			1		X		X													X							
4	H-9.3 (0-1')	11/15/2024			X				X			1		X		X													X							
5	AH-3 (0-0.5')	11/15/2024			X				X			1		X		X													X							
6	AH-3 (1')	11/15/2024			X				X			1		X		X													X							
7	AH-.3 (2')	11/15/2024			X				X			1		X		X													X							

Relinquished by:	Date:	Time:	Received by:	Date: Time:
[signature]	11-15-24	1344	[signature]	11-15-24 1345
Relinquished by:	Date:	Time:	Received by:	Date: Time:
Relinquished by:	Date:	Time:	Received by:	Date: Time:

LAB USE ONLY

Sample Temperature 2.8 C 0.0 C 22 #142

REMARKS: Run PH-1 (12') in succession pending PH-1 (11') results

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

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CARDINAL Laboratories

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

November 22, 2024

JOHN FAUGHT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: CICADA UNIT 022H RELEASE #3

Enclosed are the results of analyses for samples received by the laboratory on 11/21/24 13:24.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. 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
JOHN FAUGHT
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	11/21/2024	Sampling Date:	11/21/2024
Reported:	11/22/2024	Sampling Type:	Soil
Project Name:	CICADA UNIT 022H RELEASE #3	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-03521	Sample Received By:	Shalyn Rodriguez
Project Location:	CHEVRON - EDDY COUNTY, TX		

Sample ID: BH - 2 (7') (H247138-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.025	0.025	11/21/2024	ND	1.99	99.4	2.00	3.25	
Toluene*	<0.050	0.050	11/21/2024	ND	2.03	102	2.00	3.21	
Ethylbenzene*	<0.050	0.050	11/21/2024	ND	2.00	100	2.00	3.45	
Total Xylenes*	<0.150	0.150	11/21/2024	ND	5.95	99.1	6.00	3.42	
Total BTEX	<0.275	0.275	11/21/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	11/22/2024	ND	432	108	400	0.00	

TPH TX1005 mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C12	<25.0	25.0	11/21/2024	ND	204	102	200	0.830	
DRO >C12-C28	<25.0	25.0	11/21/2024	ND	190	95.2	200	1.92	
DRO >C28-C35	<25.0	25.0	11/21/2024	ND					
Total TPH C6-C35*	<25.0	25.0	11/21/2024	ND	395	98.8	400	1.30	

Surrogate: 1-Chlorooctane *86.0 %* *48.6-153*

Surrogate: 1-Chlorooctadecane *76.3 %* *41.9-170*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

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

Client Name:	Chevron	**Site Manager:**	John Faught
Project Name:	Cicada Unit 022H Release #3	**Contact Info:**	
Project Location: (county, state)	Eddy County, TX	**Project #:**	212C-MD-03521
Invoice to:	John.faught1@tetratech.com; OGA.ECS.AccountsPayable@tetratech.com		Req # TBD
Receiving Laboratory:	Cardinal Laboratories	**Sampler Signature:**	Matthew Castrejon

Comments: Email: john.faught1@tetratech.com; clair.gonzales@tetratech.com

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: NONE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	Chloride SM4500	HOLD
H247138	~~BH-1 (12.5')~~ MC 11-21-24	11/21/24			X				X		1		~~X~~	~~X~~ MC 11-21-24																	~~X~~	
1	BH-2 (7')	11/21/24			X				X		1		X	X																	X	

Relinquished by: Matthew Castrejon Date: 11-21-24 Time: 1324
Received by: S Rodriguez Date: 11-21-24 Time: 1324

Relinquished by: Date: Time:
Received by: Date: Time:

Relinquished by: Date: Time:
Received by: Date: Time:

ORIGINAL COPY

LAB USE ONLY

Sample Temperature 2.4i C-0.2 = 2.2i
1.8i #140

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Action 412451

QUESTIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 412451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2420727981**
Incident Name	**NAPP2420727981 CICADA UNIT #022H @ 30-015-45423**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-015-45423] CICADA UNIT #022H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	CICADA UNIT #022H
Date Release Discovered	07/20/2024
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
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	Cause: Corrosion | Flow Line - Production | Crude Oil | Released: 2 BBL | Recovered: 0 BBL | Lost: 2 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion | Flow Line - Production | Produced Water | Released: 9 BBL | Recovered: 0 BBL | Lost: 9 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
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.*

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 412451
	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: Kennedy Lincoln Title: Environmental Specialist Email: kennedy.lincoln@chevron.com Date: 07/25/2024

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 412451
	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	NM OSE iWaters Database Search
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	Greater than 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	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (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	High
A 100-year floodplain	Between ½ and 1 (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)	15800
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	20720
GRO+DRO	(EPA SW-846 Method 8015M)	18400
BTEX	(EPA SW-846 Method 8021B or 8260B)	60.7
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		01/06/2025
On what date will (or did) the final sampling or liner inspection occur		01/06/2025
On what date will (or was) the remediation complete(d)		01/13/2025
What is the estimated surface area (in square feet) that will be reclaimed		4250
What is the estimated volume (in cubic yards) that will be reclaimed		285
What is the estimated surface area (in square feet) that will be remediated		4250
What is the estimated volume (in cubic yards) that will be remediated		285
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.		

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 412451
	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	*Not answered.*
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	Yes
In which state is the disposal taking place	Texas
What is the name of the out-of-state facility	R360 Halfway
OR is the **off-site** disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
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: Kennedy Lincoln Title: Environmental Specialist Email: kennedy.lincoln@chevron.com Date: 12/16/2024
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: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 412451
	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: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 412451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**404921**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**11/21/2024**
What was the (estimated) number of samples that were to be gathered	**1**
What was the sampling surface area in square feet	**200**

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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COMMENTS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 412451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

COMMENTS

Created By	Comment	Comment Date
csmith	Returned to OCD Review, Typo's in COA's.	1/9/2025

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CONDITIONS

Action 412451

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 412451
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
nvelez	The remediation plan is approved as written. Chevron has 90-days (April 9, 2025) to submit to OCD its appropriate or final remediation closure report.	1/9/2025