



November 8, 2023

District Supervisor  
Oil Conservation Division, District 1  
1625 North French Drive  
Hobbs, New Mexico 88240

**Re: Closure Report  
ConocoPhillips (Heritage COG Production, LLC)  
Windward Federal Com #001H Flowline Release  
Unit Letter D, Section 30, Township 24 South, Range 32 East  
DOR: 6/15/2023  
Lea County, New Mexico  
Incident ID: NAPP2317143514**

Sir or Madam:

Tetra Tech, Inc. (Tetra Tech) was contacted by ConocoPhillips Company (ConocoPhillips) to assess a release that occurred from a flowline associated with the Windward Federal #001H (API# 30-025-41414) well. The release footprint is located within Public Land Survey System (PLSS) Unit Letter D, Section 30, Township 24 South, Range 32 East, in Lea County, New Mexico (Site). The approximate release point occurred at coordinates 32.194444°, -103.720278° as shown on Figures 1 and 2.

## BACKGROUND

According to the C-141 Initial Report, the release occurred on June 15, 2023, and was caused by a hole in a flowline due to corrosion. Approximately 0.117 barrels (bbls) of oil and 0.3351 bbls of produced water were reported released into a pasture area adjacent to a lease road, and no fluid was recovered. The provided spill calculator indicates a release area of approximately 30 square feet. The approximate release extent presented in Figure 3 was identified based on information provided by ConocoPhillips representatives and a review of photographs taken at the release area. The New Mexico Oil Conservation Division (NMOCD) approved the initial C-141 on June 21, 2023, and assigned the release the Incident ID NAPP2317143514. The C-141 is included as Appendix A.

On behalf of ConocoPhillips, Tetra Tech requested a 90-day extension on September 13, 2023, to complete assessment, remediation, and the associated reporting for the release site. The extension request was approved by Nelson Velez on September 15, 2023, and the remediation due date was updated to December 12, 2023, within the incident page. A copy of the regulatory correspondence is included in Appendix B.

## LAND OWNERSHIP

According to the NMOCD Oil and Gas Map, the Site is located on land owned by the Bureau of Land Management (BLM). Tetra Tech requested BLM clearance to remediate via email on October 10, 2023. The BLM cleared the Site for remediation activities via email, following a desktop review conducted by Shelly Taylor of the BLM. The regulatory correspondence is included in Appendix B.

Tetra Tech

901 West Wall St., Suite 100, Midland, TX 79701

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com

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ConocoPhillips

## SITE CHARACTERIZATION

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

According to the New Mexico Office of the State Engineer (NMOSE) reporting system, there is one well within a ½-mile (800-meter) radius of the Site, located approximately 0.46 miles (736 meters) east of the release point. This well has a total depth of 120 feet below ground surface (bgs) with no groundwater encountered. The nearest NMOSE-registered well with depth-to-water data is located (2,068 meters) from the Site and has a depth to water of 135 feet bgs. The site characterization data is included in Appendix C.

## REGULATORY FRAMEWORK

Based upon the release footprint and in accordance with Subsection E of 19.15.29.12 NMAC, per 19.15.29.11 NMAC, the site characterization data was used to determine recommended remedial action levels (RRALs) for benzene, toluene, ethylbenzene, and xylene (collectively referred to as BTEX), total petroleum hydrocarbons (TPH), and chlorides in soil.

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

Constituent	Site RRALs
Chloride	20,000 mg/kg
TPH (GRO+DRO+ORO)	2,500 mg/kg
TPH (GRO+DRO)	1,000 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

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

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

## SITE ASSESSMENT

On July 12, 2023, Tetra Tech was onsite to conduct assessment activities on behalf of ConocoPhillips. One (1) hand auger boring HA-1 was installed to 6 feet bgs in the center of the release extent. Four (4) hand auger borings (HA-2 through HA-5) were installed along the perimeter of the release extent to 1-foot bgs. Photographic documentation of the release area is presented in Appendix D.

A total of five (5) soil samples were sent to Cardinal Laboratories in Hobbs, New Mexico (Cardinal) to be analyzed for chloride via Standard Method 4500Cl-B, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B. A copy of the laboratory analytical reports and chain-of-custody documentation are included in Appendix E.

On September 12, 2023, Tetra Tech remobilized to the site to install one additional boring (BH-1) using an air rotary drill rig within the release footprint in the pasture to 15 feet bgs to complete vertical delineation of

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November 8, 2023

ConocoPhillips

the release extent. A total of fifteen (15) soil samples were sent to Cardinal to be analyzed for chloride via Standard Method 4500Cl-B, TPH via EPA Method 8015M, and BTEX via EPA Method 8021B.

Analytical results from the 2023 assessment activities are summarized in Table 1. Analytical results associated with BH-1 from the surface to 12 feet bgs exceeded the Site RRAL for TPH. Vertical and horizontal delineation was completed as a result of the additional sampling. The sampling locations are presented in Figure 3.

## REMEDIATION ACTIVITIES AND CONFIRMATION SAMPLING

Tetra Tech personnel mobilized to the site to conduct remedial activities and confirmation sampling on October 17 through October 19, 2023. Based on the collected analytical results, Tetra Tech excavated the release extent to a total depth of 12 feet bgs to remove impacted soils. Prior to confirmation sampling, in accordance with Subsection D of 19.15.29.12 NMAC, the NMOCD district office was notified via email on October 10, 2023. As mentioned, the BLM was contacted for clearance prior to remedial action. Copies of the regulatory correspondence are included in Appendix B.

All of the excavated material was transported offsite for proper disposal. Approximately seventy (70) cubic yards of material were transported to the R360 Halfway Facility in Hobbs, New Mexico. Copies of the waste manifest documents are included in Appendix F.

A total of one (1) floor sample location and four (4) sidewall sample locations were used during the remedial activities. Confirmation sidewall sample locations were labeled with "SW"-#, and confirmation floor sample locations were labeled with "FS"-#. Analytical results for all confirmation soil samples (floor and sidewall) were below the applicable Site RRALs and reclamation limits for chloride, BTEX, and TPH. The results of the 2023 confirmation sampling events are summarized in Table 2. Laboratory analytical data is included in Appendix E.

Once confirmation sampling activities were completed, the excavated areas were backfilled with clean material to surface grade. Photographs from the excavated areas prior to backfill are provided in Appendix D. The backfilled areas were seeded with the BLM seed mixture for LPC Sand/Shinnery Sites to aid in revegetation. Remediated areas, depths and confirmation sample locations are shown in Figure 4.

## CONCLUSION

Based on the results of the remedial activities and confirmation sampling, ConocoPhillips respectfully requests closure of the incident. The current release footprint is fully remediated. Analytical results associated with the sampling events were below applicable Site RRALs following all remedial response actions; therefore, remediation of the release footprint is complete. The impacted surface area was remediated to meet the standards of Table I of 19.15.29.12 NMAC.

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November 8, 2023

ConocoPhillips

This final closure report details the release characterization, remediation activities and the results of the assessment sampling. The final C-141 forms are enclosed in Appendix A. If you have any questions concerning the soil assessment activities for the Site, please call me at (512) 739-7874.

Sincerely,

**Tetra Tech, Inc.**



Samantha Abbott, P.G.  
Project Manager



Christian M. Llull, P.G.  
Program Manager

cc:  
Mr. Jacob Laird, GPBU – ConocoPhillips

## LIST OF ATTACHMENTS

### Figures:

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

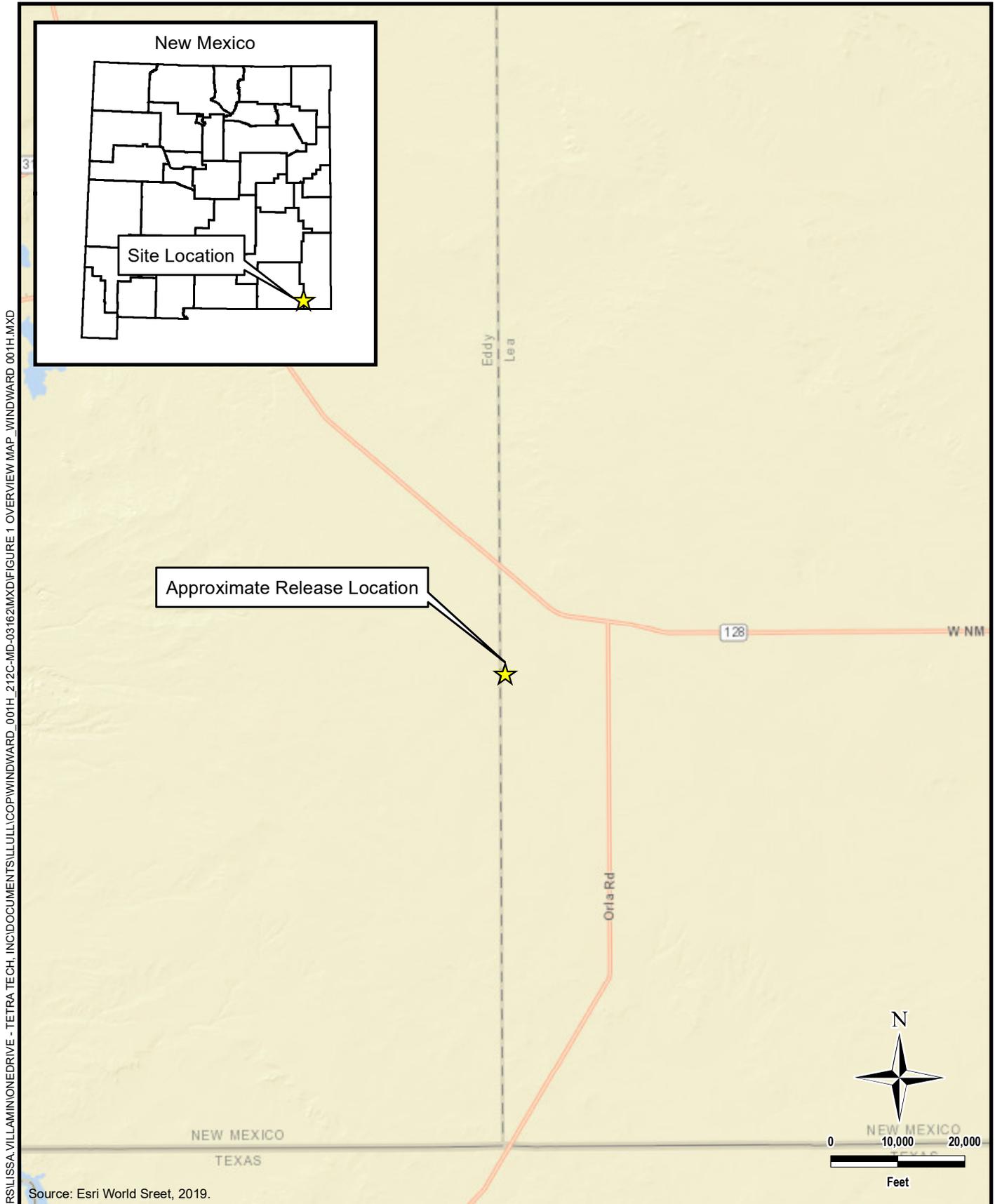
### Tables:

- Table 1 – Summary of Analytical Results – 2023 Soil Assessment
- Table 2 – Summary of Analytical Results – Soil Remediation

### Appendices:

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

# **FIGURES**



DOCUMENT PATH: C:\USERS\LISSA.VILLAMINIONEDRIVE - TETRA TECH\INCIDENTS\ILLULLI\COP\WINDWARD\_001H\_212C-MD-03162\MXD\FIGURE 1 OVERVIEW MAP\_WINDWARD\_001H.MXD

Source: Esri World Street, 2019.



**TETRA TECH**

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Midland, Texas 79701  
Phone: (432) 682-4559  
Fax: (432) 682-3946

CONOCOPHILLIPS

NAPP2317143514  
LEA COUNTY, NEW MEXICO  
(32.194444°, -103.720278°)

**WINDWARD FEDERAL COM 001H FLOWLINE RELEASE  
OVERVIEW MAP**

PROJECT NO.: 212C-MD-03162

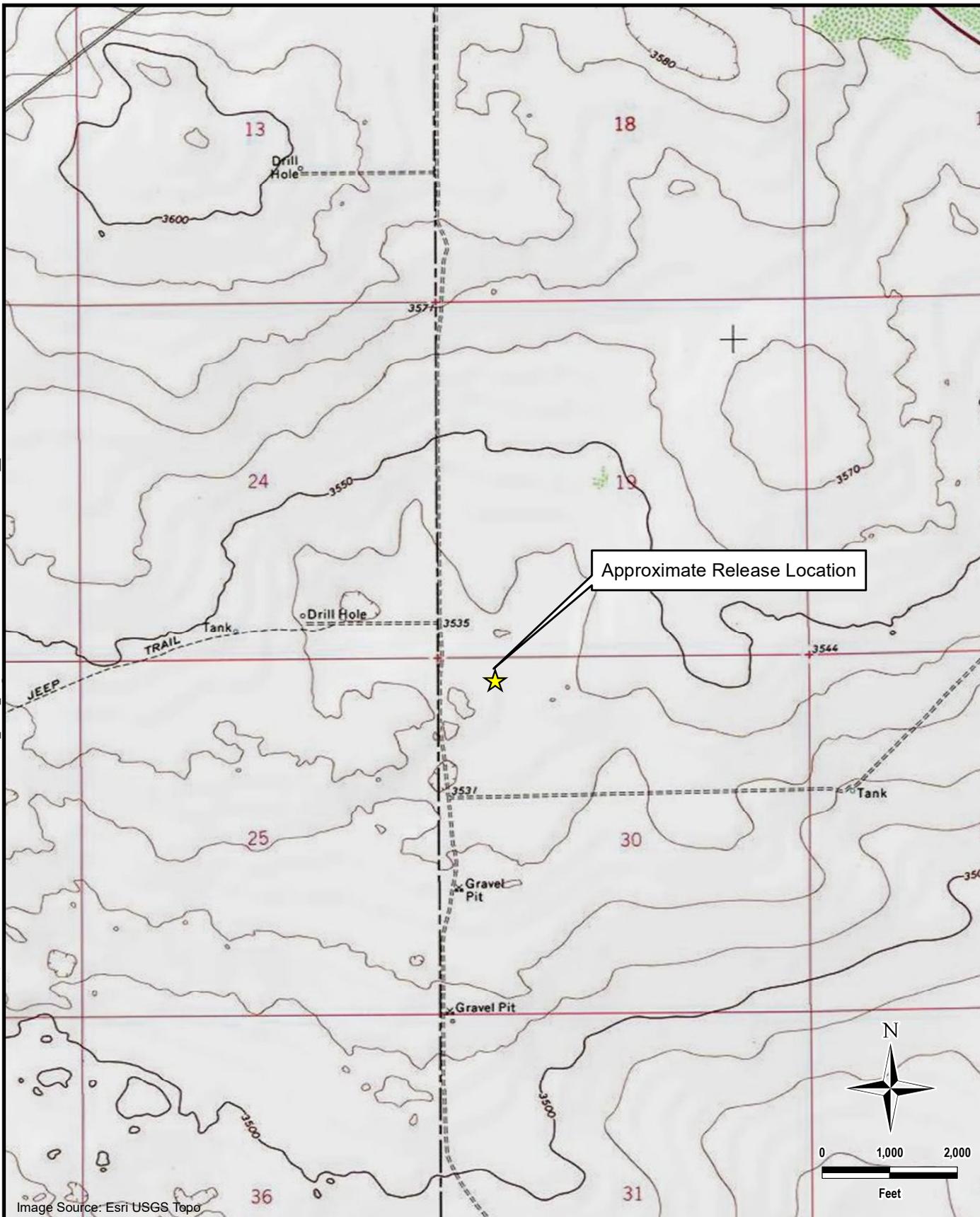
DATE: NOVEMBER 07, 2023

DESIGNED BY: LMV

Figure No.

**1**

DOCUMENT PATH: C:\USERS\LISSA.VILLAMINONEDRIVE - TETRA TECH\INCIDENTS\ILLULLI\COP\WINDWARD\_001H\_212C-MD-03162\MXD\FIGURE 2 TOPO MAP\_WINDWARD\_001H.MXD



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**WINDWARD FEDERAL COM 001H FLOWLINE RELEASE  
TOPOGRAPHIC MAP**

PROJECT NO.: 212C-MD-03162

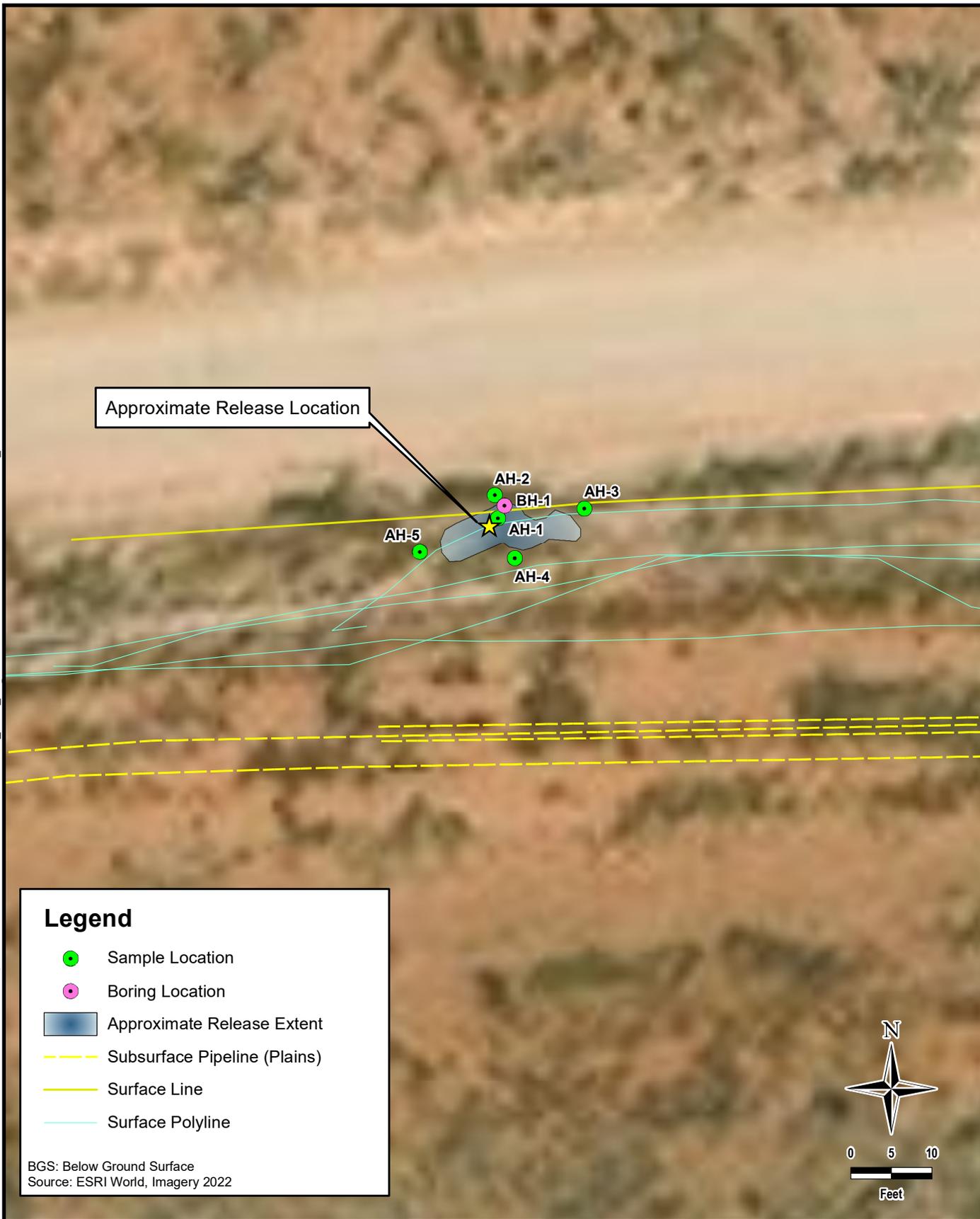
DATE: NOVEMBER 07, 2023

DESIGNED BY: LMV

Figure No.

**2**

DOCUMENT PATH: C:\USERS\LISSA.VILLAMINIONEDRIVE - TETRA TECH\INCIDOCUMENTS\ILLULLI\COP\WINDWARD\_001H\_212C-MD-03162\MXD\FIGURE 3 SITE ASSESS\_WINDWARD\_001H.MXD



**Legend**

- Sample Location
- Boring Location
- Approximate Release Extent
- Subsurface Pipeline (Plains)
- Surface Line
- Surface Polyline

BGS: Below Ground Surface  
Source: ESRI World, Imagery 2022



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**CONOCOPHILLIPS**

NAPP2317143514  
LEA COUNTY, NEW MEXICO  
(32.194444°, -103.720278°)

**WINDWARD FEDERAL COM 001H FLOWLINE RELEASE  
SITE ASSESSMENT**

PROJECT NO.:	212C-MD-03162
DATE:	NOVEMBER 07, 2023
DESIGNED BY:	LMV
Figure No.	<b>3</b>

DOCUMENT PATH: C:\USERS\LISSA.VILLAMINONEDRIVE - TETRA TECH\INCIDENTS\ILLULLI\COPI\WINDWARD\_001H\_212C-MD-03162\MXD\FIGURE 4 REMEDIATION & CONFIRM WINDWARD\_001H.MXD



**Legend**

- Confirmation Sidewall Sample Location
- Confirmation Floor Sample Location
- Approximate Release Extent
- Remediation - 12' BGS
- Subsurface Pipeline (Plains)
- Surface Line
- Surface Polyline

BGS: Below Ground Surface  
Source: ESRI World, Imagery 2022



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**CONOCOPHILLIPS**

NAPP2317143514  
LEA COUNTY, NEW MEXICO  
(32.194444°, -103.720278°)

**WINDWARD FEDERAL COM 001H FLOWLINE RELEASE  
REMEDATION EXTENT AND CONFIRMATION SAMPLING LOCATIONS**

PROJECT NO.:	212C-MD-03162
DATE:	NOVEMBER 07, 2023
DESIGNED BY:	LMV
Figure No.	<b>4</b>

# **TABLES**

TABLE 1  
 SUMMARY OF ANALYTICAL RESULTS  
 2023 SOIL ASSESSMENT- nAPP2317143514  
 CONOCOPHILLIPS  
 WINDWARD FEDERAL COM # 001H  
 LEA COUNTY, NM

19.15.29.12 NMAC Closure Criteria for Soils Impacted by a Release (>100 ft):				Chlorides <sup>1</sup>		BTEX <sup>2</sup>										TPH <sup>3</sup>							
				< 20,000 mg/kg		< 10 mg/kg		Toluene		Ethylbenzene		Total Xylenes		< 50 mg/kg		GRO		DRO		EXT DRO		< 2,500 mg/kg	
Sample ID	Sample Date	Sample Depth Interval	Field Screening Results		Chloride		Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		C <sub>6</sub> - C <sub>10</sub>		> C <sub>10</sub> - C <sub>28</sub>		> C <sub>28</sub> - C <sub>36</sub>		Total TPH (GRO+DRO+EXT DRO)
			Chlorides	PID	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
			ft. bgs	ppm																			mg/kg
AH-1	7/12/2023	0.5-1			<16.0		<0.050		0.26		<0.050	GC-NC	7.47	GC-NC1	7.73	GC-NC1	429		13,600		2,490		<b>16,519</b>
		3-4			<16.0		<0.200		1.42		<0.200		41.6	GC-NC1	43.0	GC-NC1	1,060		5,440		796		<b>7,296</b>
		5-6			<b>3,240</b>		7.94		77.2		23.5		149		258		4,620		8,920		1,540		<b>15,080</b>
AH-2	7/12/2023	0-1	250		160		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		25.5		<10.0		25.5
AH-3	7/12/2023	0-1	69.3		32.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
AH-4	7/12/2023	0-1	151		80.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
AH-5	7/12/2023	0-1	89.7		48.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		14.3		<10.0		14.3
BH-1	9/12/2023	0-1			96.0		<0.050		0.248		0.354		6.17		6.77		309		4,920		830		<b>6,059</b>
		2-3			528		<0.200		3.52		2.95		25.3		31.7		568		5,440		878		<b>6,886</b>
		4-5			832		0.647		17.0		6.68		46.3		<b>70.6</b>		703		5,100		827		<b>6,630</b>
		6-7			336		<0.200		3.37		2.77		17.3		23.5		621		6,330		996		<b>7,947</b>
		8-9			240		<0.500		4.56		3.09		20.8		28.5		994		9,780		1,530		<b>12,304</b>
		9-10			256		1.32		17.1		5.84		38.7		62.9		1,030		7,540		1,210		<b>9,780</b>
		12-13			80.0		<0.050		0.621		0.621		0.511		3.86		4.99		108		1,890		339
		14-15			112		<0.050		<0.050		<0.050		0.200		<0.300		<10.0		54.0		15.0		69.0

NOTES:

- ft. Feet
- bgs Below ground surface
- mg/kg Milligrams per kilogram
- TPH Total Petroleum Hydrocarbons
- GRO Gasoline range organics
- DRO Diesel range organics
- 1 Method SM4500C1-B
- 2 Method 8021B
- 3 Method 8015M

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

Shaded rows indicate intervals removed during the remedial activities.

QUALIFIERS:

TABLE 2  
 SUMMARY OF ANALYTICAL RESULTS  
 SOIL REMEDIATION - nAPP2317143514  
 CONOCOPHILLIPS  
 WINDWARD FEDERAL COM # 001H  
 LEA COUNTY, NM

Sample ID	Sample Date	Sample Depth	Field Screening Results		Chloride <sup>1</sup>		BTEX <sup>2</sup>								TPH <sup>3</sup>								
			Chloride	PID			Benzene		Toluene		Ethylbenzene		Total Xylenes		Total BTEX		GRO		DRO		EXT DRO		Total TPH (GRO+DRO+EXT DRO)
			ft. bgs	ppm	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	
NSW-1	10/17/2023	-	52.5		16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0	QR-03	<10.0	QR-03	<10.0		-
SSW-1	10/17/2023	-	52.9		16		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
ESW-1	10/17/2023	-	88.2		<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
WSW-1	10/17/2023	-	84.9		<16.0		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-
FS-1	10/17/2023	12	88.2		96		<0.050		<0.050		<0.050		<0.150		<0.300		<10.0		<10.0		<10.0		-

NOTES:

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

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

QUALIFIERS:

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 LCS/D recovery and/or RPD values.

# **APPENDIX A C-141 Forms**

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

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

### Location of Release Source

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner:  State  Federal  Tribal  Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

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

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

Cause of Release

State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

### Initial Response

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

<input type="checkbox"/> The source of the release has been stopped. <input type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name _____ Title: _____ Signature: <u></u> _____ Date: _____ email: _____ Telephone: _____
<b><u>OCD Only</u></b>  Received by: <u>Shelly Wells</u> _____ Date: <u>6/21/2023</u> _____

*Received by OCD: 11/27/2023 10:08:05PAM*

Known Area (dropdown):

Yes

*Released to Imaging: 1/12/2024 11:48:18PAM*



Mapped Area (sq. ft.)	Average Depth (in.)	Percentage of Oil if Spilled Fluid is a Mixture (%)	Total Estimated Volume of Spill (bbl.)	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Spilled Liquid other than Oil (bbl.)
30	1	25%	0.4469	0.1117	0.3351

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

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

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

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

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

CONDITIONS  
 Action 230719

**CONDITIONS**

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 230719
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
scwells	None	6/21/2023

Incident ID	
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: Jacob Laird Date: \_\_\_\_\_

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

**OCD Only**

Received by: Shelly Wells Date: 11/27/2023

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

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

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

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

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: Jacob Laird Date: \_\_\_\_\_

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

**OCD Only**

Received by: Shelly Wells Date: 11/27/2023

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

Closure Approved by: Scott Rodgers Date: 01/12/2024

Printed Name: Scott Rodgers Title: Environmental Specialist Adv.

# **APPENDIX B**

## **Regulatory Correspondence**

**From:** [Velez, Nelson, EMNRD](#)  
**To:** [Abbott, Sam](#)  
**Cc:** [Jacob.Laird@conocophillips.com](mailto:Jacob.Laird@conocophillips.com); [Llull, Christian](#); [Chavira, Lisbeth](#); [Bratcher, Michael, EMNRD](#)  
**Subject:** Re: [EXTERNAL] Extension Request - nAPP2317143514 (Windward Federal 1H )  
**Date:** Friday, September 15, 2023 2:34:20 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[Outlook-wtfpi2i0.png](#)

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Some people who received this message don't often get email from [nelson.velez@emnrn.nm.gov](mailto:nelson.velez@emnrn.nm.gov). [Learn why this is important](#)

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

Good afternoon Sam,

Your 90-day time extension request is approved. Remediation Due date has been updated to December 12, 2023 within the incident page.

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

Regards,

**Nelson Velez** • Environmental Specialist - Adv  
Environmental Bureau | EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87410  
(505) 469-6146 | [nelson.velez@emnrn.nm.gov](mailto:nelson.velez@emnrn.nm.gov)  
<http://www.emnrn.state.nm.us/OCD/>



---

**From:** Wells, Shelly, EMNRD <[Shelly.Wells@emnrn.nm.gov](mailto:Shelly.Wells@emnrn.nm.gov)>  
**Sent:** Wednesday, September 13, 2023 4:13 PM  
**To:** Velez, Nelson, EMNRD <[Nelson.Velez@emnrn.nm.gov](mailto:Nelson.Velez@emnrn.nm.gov)>  
**Cc:** Bratcher, Michael, EMNRD <[mike.bratcher@emnrn.nm.gov](mailto:mike.bratcher@emnrn.nm.gov)>  
**Subject:** FW: [EXTERNAL] Extension Request - nAPP2317143514 (Windward Federal 1H )

---

**From:** Abbott, Sam <Sam.Abbott@tetrattech.com>  
**Sent:** Wednesday, September 13, 2023 3:18 PM  
**To:** Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>  
**Cc:** Laird, Jacob <Jacob.Laird@conocophillips.com>; Llull, Christian <Christian.Llull@tetrattech.com>; Chavira, Lisbeth <LISBETH.CHAVIRA@tetrattech.com>  
**Subject:** [EXTERNAL] Extension Request - nAPP2317143514 (Windward Federal 1H )

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

To Whom It May Concern,

On behalf of ConocoPhillips, Tetra Tech is requesting an additional 90-day extension (until December 12, 2023) to complete additional assessment activities and associated reporting for the Windward Federal 1H Flowline Release site (**nAPP2317143514**). The release occurred on June 15, 2023, and the initial C-141 Report Form was received by NMOCD on December 12, 2023. ConocoPhillips immediately commenced pursuing a 90-day (September 13, 2023) release characterization and closure per 19.15.29.11(A) NMAC.

Tetra Tech was onsite on July 12, 2023 to sample and delineate the release on behalf of ConocoPhillips. Horizontal delineation was achieved at this time, but Tetra Tech was not able to complete vertical delineation with a hand auger. After experiencing scheduling delays, Tetra Tech returned to the site with an air rotary drill rig to complete vertical delineation of the release on September 12, 2023. Tetra Tech and ConocoPhillips need additional time to complete evaluation of the additional assessment data, any required remedial actions, and subsequent reporting. A complete report will be submitted to the OCD within the requested timeframe.

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

Thank you in advance,  
 Sam

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

**Tetra Tech, Inc.** | *Leading with Science*<sup>®</sup> | OGA  
 8911 N Capital of Texas Hwy #2310 | Austin, TX 78759 | [tetrattech.com](http://tetrattech.com)

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**From:** [Taylor, Shelly J](#)  
**To:** [Lull, Christian](#)  
**Cc:** [Chavira, Lisbeth](#); [Abbott, Sam](#)  
**Subject:** RE: [EXTERNAL] Request for Approval - Remediation (Windward Federal Com 001H Flowline Release)  
**Date:** Thursday, October 12, 2023 4:04:38 PM  
**Attachments:** [image007.png](#)  
[image008.jpg](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)  
[image012.png](#)  
[image013.png](#)

You don't often get email from sjtaylor@blm.gov. [Learn why this is important](#)

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You are cleared to proceed with remedial activities.

Sincerely,

*Shelly J Taylor*

Environmental Protection Specialist  
 Realty - Compliance

Bureau of Land Management/Carlsbad Field Office  
 620 E. Greene St  
 Carlsbad, NM 88220  
 Direct 575.234.5706  
 Mobile 575.499.6831  
[sjtaylor@blm.gov](mailto:sjtaylor@blm.gov)



**Spill/Release email: [BLM\\_NM\\_CFO\\_REALTY\\_SPILL@BLM.GOV](mailto:BLM_NM_CFO_REALTY_SPILL@BLM.GOV)**

**From:** Lull, Christian <Christian.Lull@tetrattech.com>  
**Sent:** Tuesday, October 10, 2023 9:07 AM  
**To:** Taylor, Shelly J <sjtaylor@blm.gov>  
**Cc:** Chavira, Lisbeth <LISBETH.CHAVIRA@tetrattech.com>; Abbott, Sam <Sam.Abbott@tetrattech.com>  
**Subject:** [EXTERNAL] Request for Approval - Remediation (Windward Federal Com 001H Flowline Release)

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Hey Shelly,

Good morning! Another small remediation for ConocoPhillips.

Tetra Tech is assisting with the remedial action associated with a previously reported unplanned release that occurred on June 15, 2023.

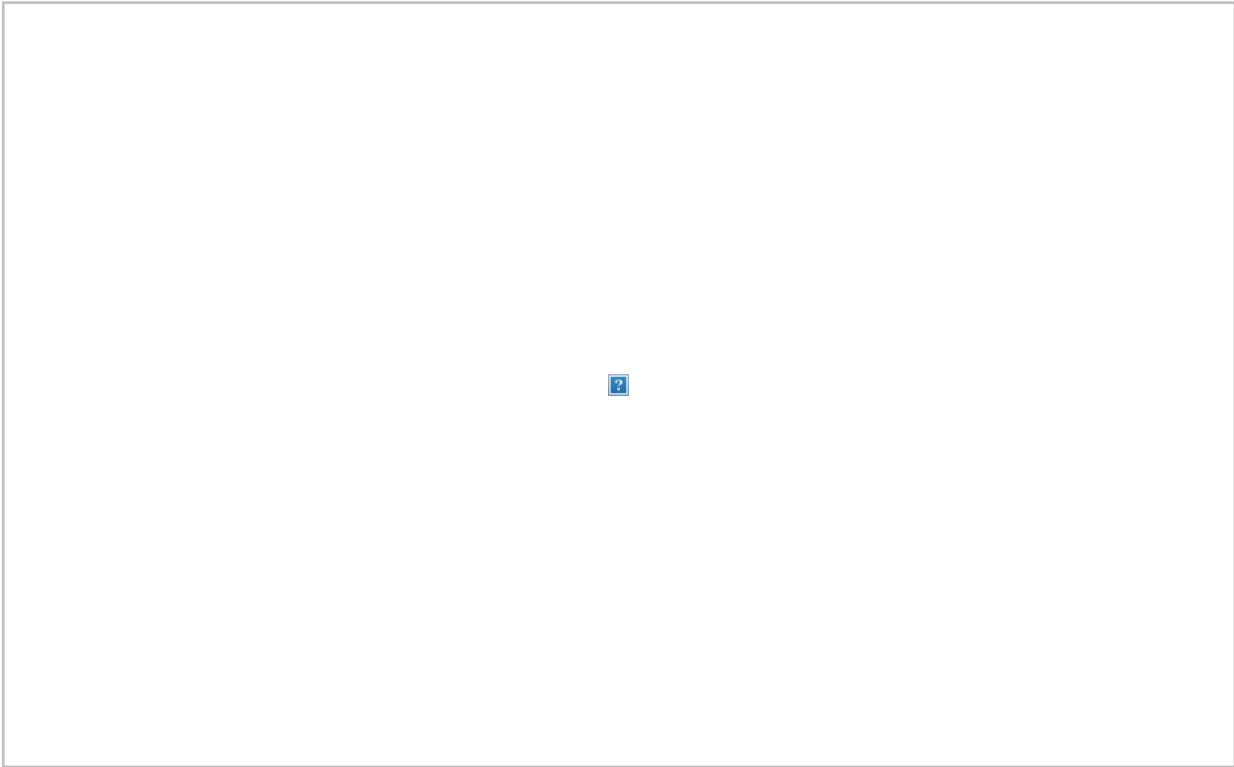
The work is expected to take 2 days.

The **Windward Federal Com 001H Flowline Release** is an approximate 100 square foot area in pasture, just off a lease road, southwest of the Windward and King Tut batteries.

In order to complete the remediation and the submittal process we are requesting verbal approval to proceed with cleanup at the location listed below. KMZ file attached and screengrab below.

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

**Name of Release: Windward Federal Com 001H Flowline Release**  
**Unit Letter D, Section 30, Township 24 South, Range 32 East**  
**Lea County, New Mexico**  
**Incident Identification (ID) nAPP2317143514**  
**Approximate Release Location: 32.194444°, -103.720278°**  
**Date Release Discovered: June 15, 2023**  
**Volume Released: Approximately 0.117 barrels (bbls) of crude oil and 0.3351 bbls of produced water were released.**  
**Release in Pasture**



We plan to start work a week from today.  
Please let me know at your earliest convenience if we are clear to remediate?

Thank you in advance.

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

**Tetra Tech** | *Leading with Science*<sup>®</sup> | OGA  
8911 N. Capital of Texas Highway | Bldg. 2, Suite 2310 | Austin, TX 78759 | [tetratech.com](http://tetratech.com)

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**From:** [Wells, Shelly, EMNRD](#)  
**To:** [Chavira, Lisbeth](#); [Velez, Nelson, EMNRD](#); [Bratcher, Michael, EMNRD](#)  
**Cc:** [Abbott, Sam](#)  
**Subject:** RE: [EXTERNAL] Incident ID: nAPP2317143514 - Confirmation Sampling  
**Date:** Tuesday, October 10, 2023 4:23:56 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)

---

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Hi Lisbeth,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

**Shelly Wells** \* Environmental Specialist-Advanced  
Environmental Bureau  
EMNRD-Oil Conservation Division  
1220 S. St. Francis Drive | Santa Fe, NM 87505  
(505)469-7520 | [Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>

---

**From:** Chavira, Lisbeth <[LISBETH.CHAVIRA@tetrattech.com](mailto:LISBETH.CHAVIRA@tetrattech.com)>  
**Sent:** Tuesday, October 10, 2023 2:57 PM  
**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>  
**Cc:** Abbott, Sam <[Sam.Abbott@tetrattech.com](mailto:Sam.Abbott@tetrattech.com)>  
**Subject:** [EXTERNAL] Incident ID: nAPP2317143514 - Confirmation Sampling

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

Incident ID (n#) **nAPP2317143514** (Windward Federal Com 001H Flowline Release)

To whom it may concern,

In accordance with Subsection D of 19.15.29.12 NMAC, the responsible party must verbally notify the appropriate division district office prior to conducting confirmation sampling.

Remediation activities of the release will begin Tuesday, October 17, 2023.

Thus, on behalf of ConocoPhillips for the above referenced incident, Tetra Tech is duly providing this communication which serves as notification that final confirmation sampling will be conducted at this site **Wednesday, October 18, 2023.**

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

Thank you,

**Lisbeth Chavira** | Staff Geoscientist  
Direct Mobile +1 (512) 596-8201 | [Lisbeth.chavira@tetrattech.com](mailto:Lisbeth.chavira@tetrattech.com)

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8911 N. Capital of Texas Highway | Bldg. 2, Suite 2310 | Austin, TX 78759 | [tetrattech.com](http://tetrattech.com)

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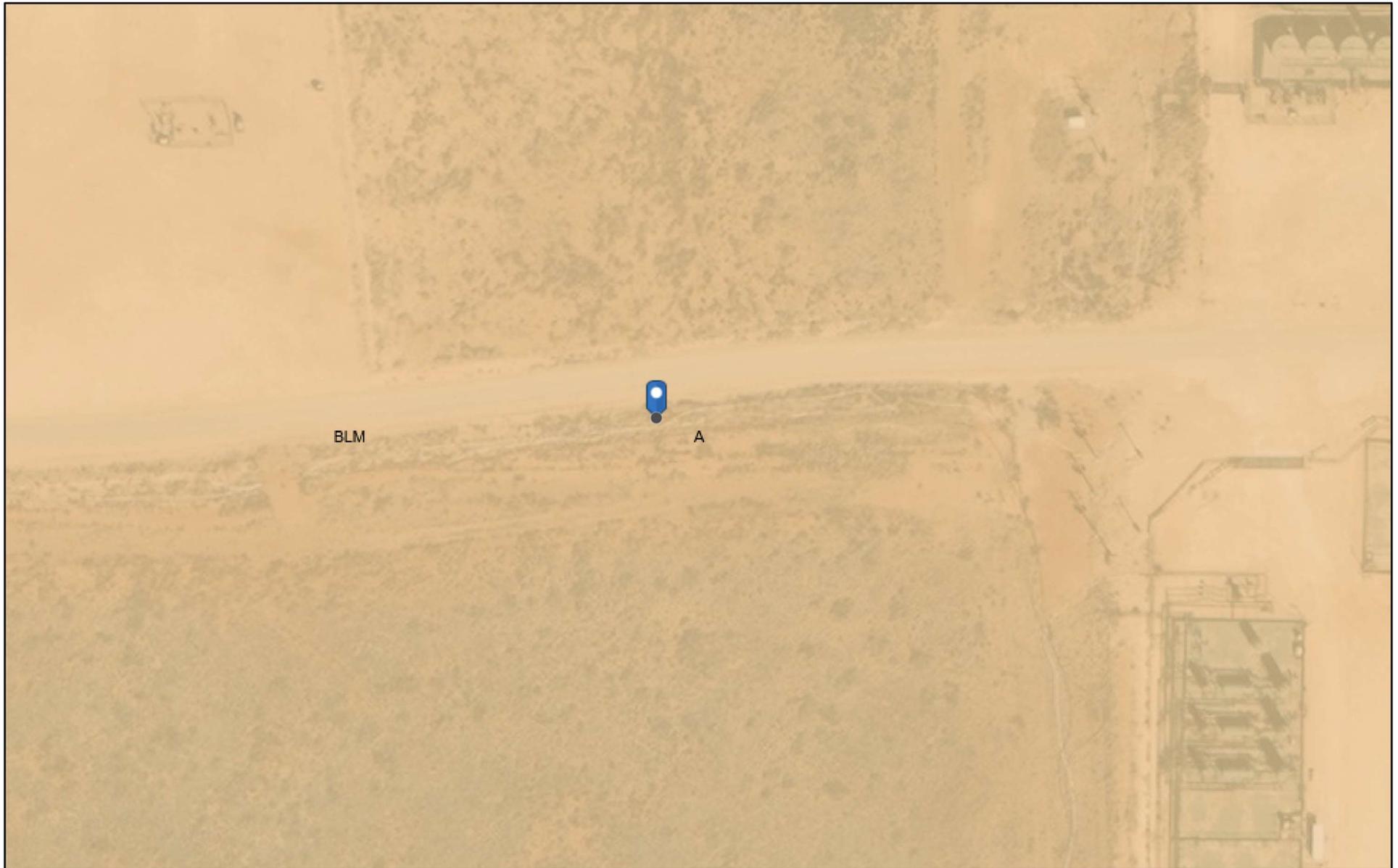
Adobe Systems



# **APPENDIX C**

## **Site Characterization Data**

# OCD Land Ownership



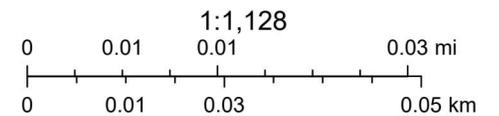
10/26/2023, 2:18:30 PM

Mineral Ownership

Land Ownership

A-All minerals are owned by U.S.

BLM



U.S. BLM, Maxar, Microsoft, Esri, HERE, Garmin, iPC

# National Flood Hazard Layer FIRMMette



103°43'32"W 32°11'56"N



## 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**
    - Cross Sections with 1% Annual Chance Water Surface Elevation: 20.2 (B), 17.5
    - Coastal Transect
    - Base Flood Elevation Line (BFE)
    - Limit of Study
    - Jurisdiction Boundary
    - Coastal Transect Baseline
    - Profile Baseline
    - Hydrographic Feature
  - MAP PANELS**
    - Digital Data Available
    - No Digital Data Available
    - Unmapped
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

0 250 500 1,500 2,000 Feet

1:6,000

103°42'55"W 32°11'25"N

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/26/2023 at 3:15 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.

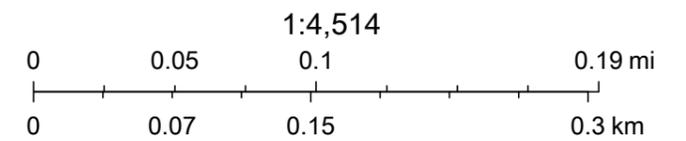
# OCD Karst Potential



7/31/2023, 4:56:45 PM

Karst Occurrence Potential

Low

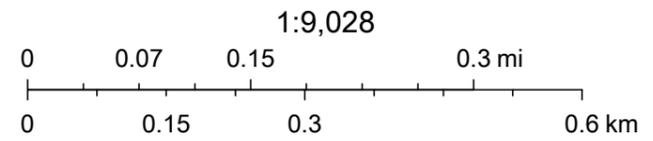


BLM, OCD, New Mexico Tech, Esri, HERE, Garmin, iPC, Maxar

# OCD Waterbodies



7/31/2023, 4:58:05 PM



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



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">C 04665</a>	CUB	LE		1	1	2	30	24S	32E	621350	3562798	736	120		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

**Record Count:** 1

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

**Easting (X):** 620617.67

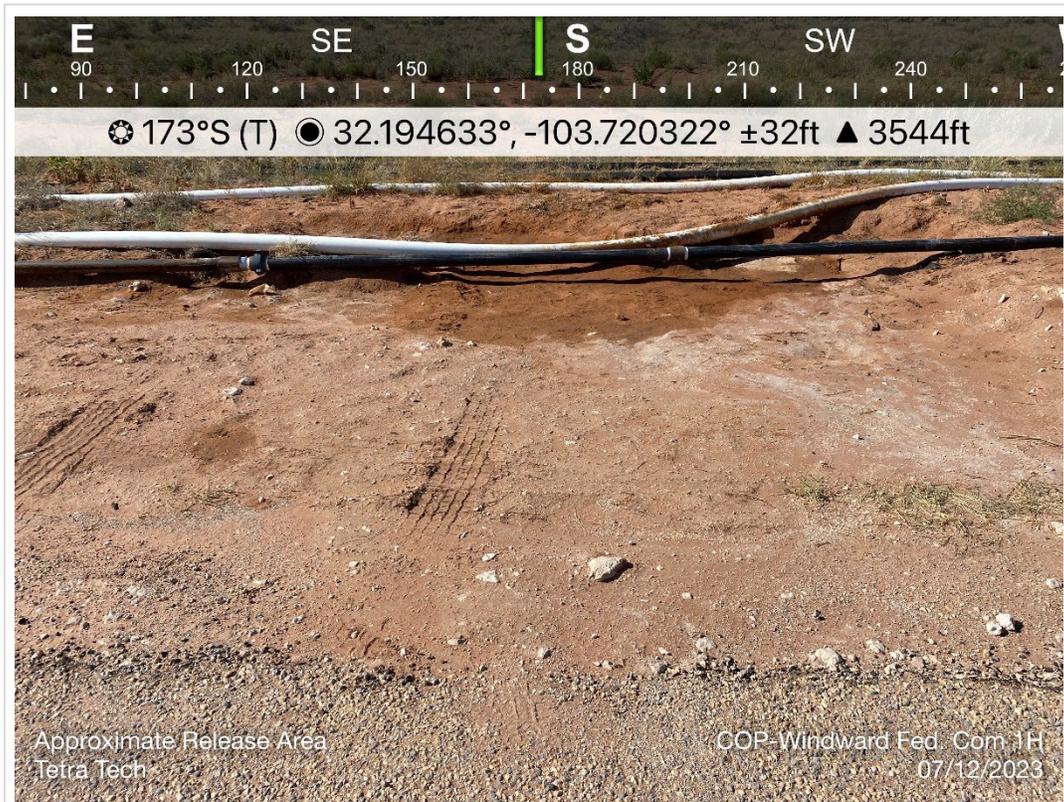
**Northing (Y):** 3562719

**Radius:** 1200

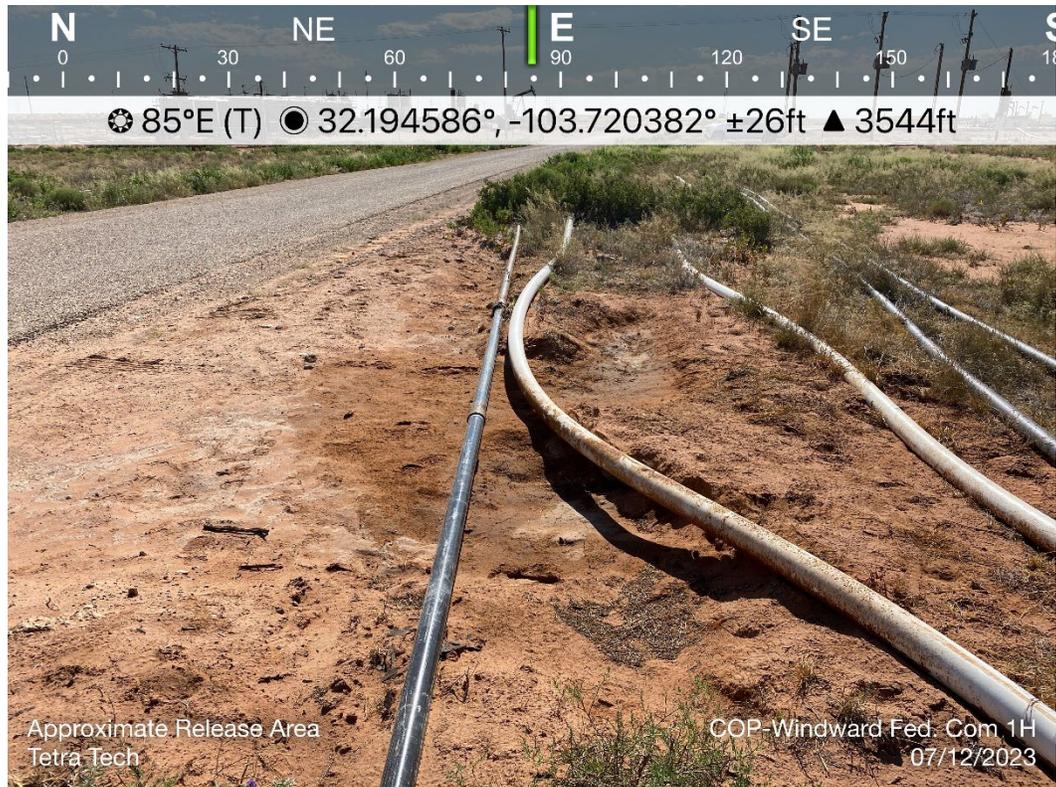
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

# **APPENDIX D**

## **Photographic Documentation**



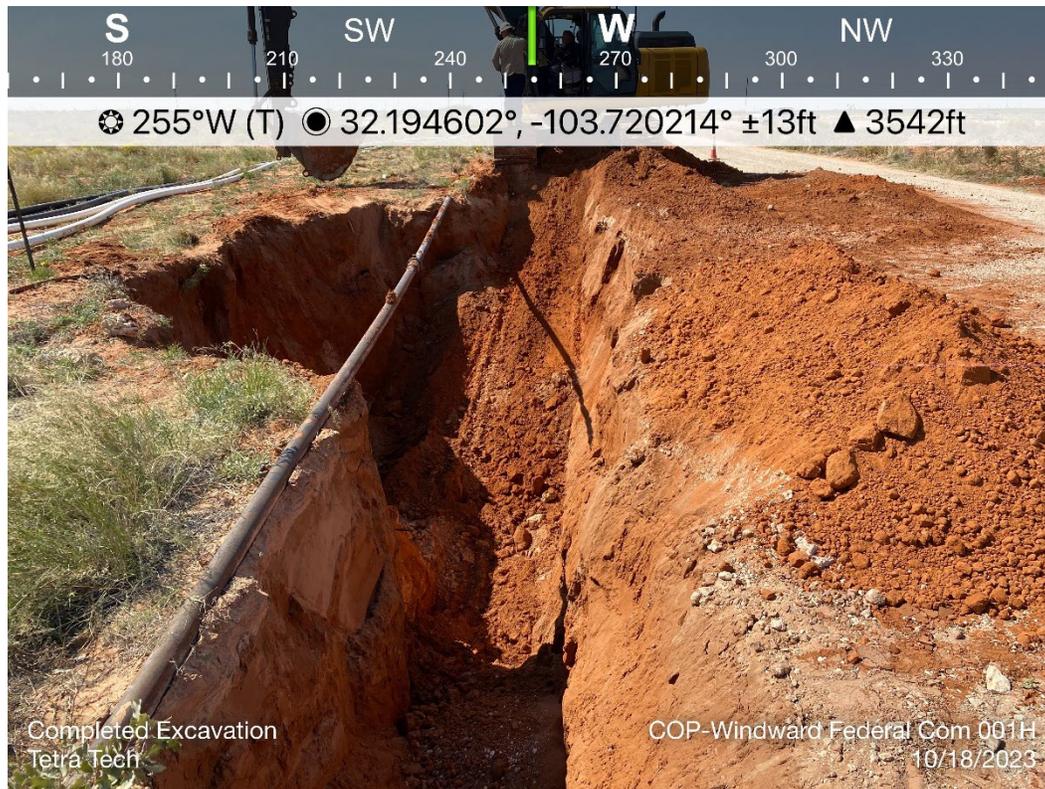
TETRA TECH, INC. PROJECT NO. 212C-MD-03162	DESCRIPTION	View south of approximate release extent and surface polylines. Staining observed.	1
	SITE NAME	Windward Federal Com #001H Release	7/12/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03162	DESCRIPTION	View east of approximate release extent and surface polylines. Staining observed.	2
	SITE NAME	Windward Federal Com #001H Release	7/12/2023



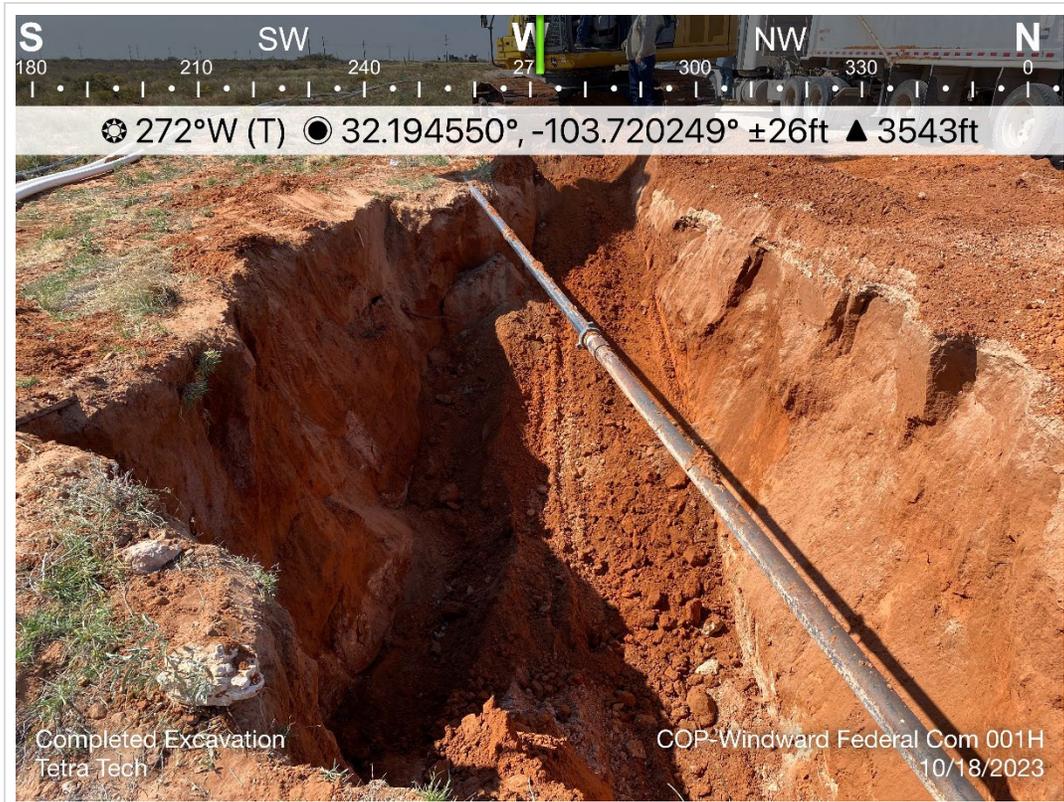
TETRA TECH, INC. PROJECT NO. 212C-MD-03162	DESCRIPTION	View west of approximate release extent and surface polylines. Staining observed.	3
	SITE NAME	Windward Federal Com #001H Release	7/12/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03162	DESCRIPTION	View west-southwest of open excavation of approximately 12 ft bgs.	4
	SITE NAME	Windward Federal Com #001H Release	10/18/2023



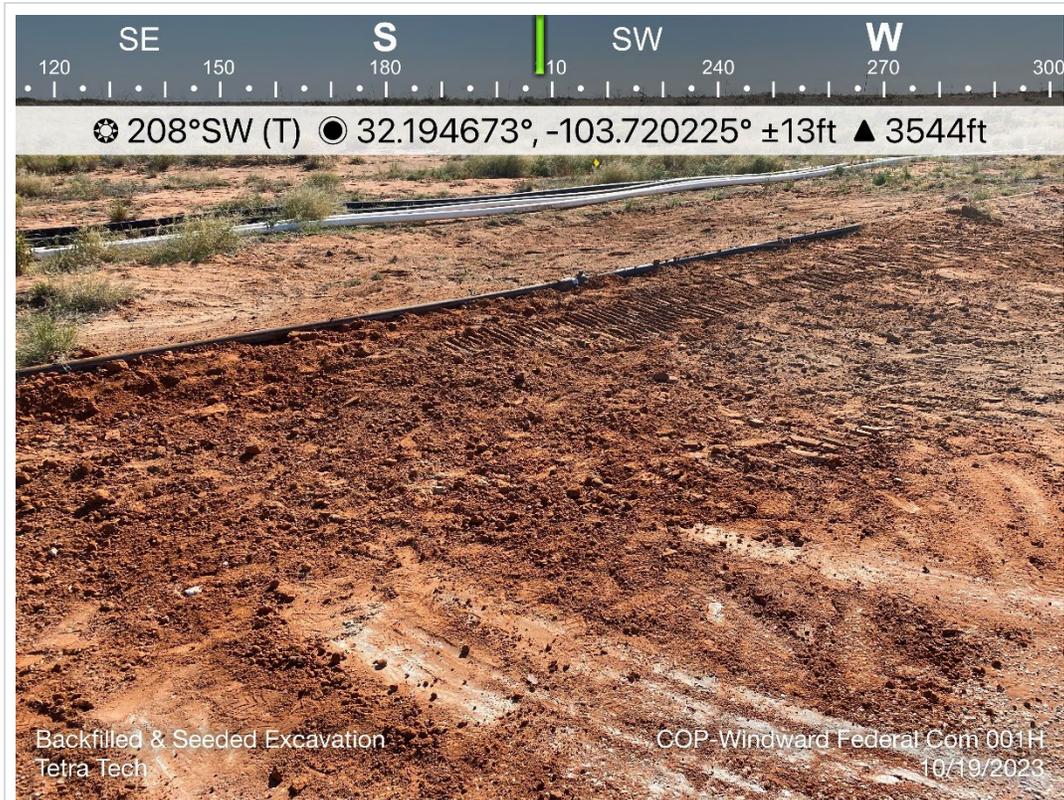
TETRA TECH, INC. PROJECT NO. 212C-MD-03162	DESCRIPTION	View north-northeast of open excavation of approximately 12 ft bgs.	5
	SITE NAME	Windward Federal Com #001H Release	10/18/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03162	DESCRIPTION	View west of open excavation of approximately 12 ft bgs.	6
	SITE NAME	Windward Federal Com #001H Release	10/18/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03162	DESCRIPTION	View east-northeast of backfilled and seeded excavation. View of reclamation activities.	7
	SITE NAME	Windward Federal Com #001H Release	10/19/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03162	DESCRIPTION	View south-southwest of backfilled and seeded excavation. View of reclamation activities.	8
	SITE NAME	Windward Federal Com #001H Release	10/19/2023



TETRA TECH, INC. PROJECT NO. 212C-MD-03162	DESCRIPTION	View east of backfilled and seeded excavation. View of reclamation activities.	9
	SITE NAME	Windward Federal Com #001H Release	10/19/2023

# **APPENDIX E**

## **Laboratory Analytical Data**



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

October 31, 2023

CHRISTIAN LLULL

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: WINDWARD FEDERAL COM 001H FL RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 07/12/23 12:28.

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

Cardinal Laboratories is accredited 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

Lab Director/Quality Manager



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: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH - 1 ( 0.5'-1' )	H233551-01	Soil	12-Jul-23 00:00	12-Jul-23 12:28
AH - 1 ( 3'-4' )	H233551-02	Soil	12-Jul-23 00:00	12-Jul-23 12:28
AH - 1 ( 5'-6' )	H233551-03	Soil	12-Jul-23 00:00	12-Jul-23 12:28
AH - 2 ( 0-1' )	H233551-04	Soil	12-Jul-23 00:00	12-Jul-23 12:28
AH - 3 ( 0-1' )	H233551-05	Soil	12-Jul-23 00:00	12-Jul-23 12:28
AH - 4 ( 0-1' )	H233551-06	Soil	12-Jul-23 00:00	12-Jul-23 12:28
AH - 5 ( 0-1' )	H233551-07	Soil	12-Jul-23 00:00	12-Jul-23 12:28

10/31/23 - Client changed the sample IDs (see COC). This is the revised report and will replace the one sent on 07/18/23.

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**Analytical Results For:**

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**AH - 1 ( 0.5'-1' )  
H233551-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	3071315	AC	13-Jul-23	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

**S-04**

Benzene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
<b>Toluene*</b>	<b>0.260</b>		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	GC-NC
<b>Total Xylenes*</b>	<b>7.47</b>		0.150	mg/kg	50	3071233	MS	13-Jul-23	8021B	GC-NC1
<b>Total BTEX</b>	<b>7.73</b>		0.300	mg/kg	50	3071233	MS	13-Jul-23	8021B	GC-NC1
Surrogate: 4-Bromofluorobenzene (PID)			237 %	71.5-134		3071233	MS	13-Jul-23	8021B	

**Petroleum Hydrocarbons by GC FID**

**S-06**

<b>GRO C6-C10*</b>	<b>429</b>		50.0	mg/kg	5	3071236	MS	14-Jul-23	8015B	
<b>DRO &gt;C10-C28*</b>	<b>13600</b>		50.0	mg/kg	5	3071236	MS	14-Jul-23	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>2490</b>		50.0	mg/kg	5	3071236	MS	14-Jul-23	8015B	
Surrogate: 1-Chlorooctane			214 %	48.2-134		3071236	MS	14-Jul-23	8015B	
Surrogate: 1-Chlorooctadecane			311 %	49.1-148		3071236	MS	14-Jul-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**AH - 1 ( 3'-4' )  
H233551-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

Chloride	<16.0		16.0	mg/kg	4	3071315	AC	13-Jul-23	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

**S-04**

Benzene*	<0.200		0.200	mg/kg	200	3071233	MS	13-Jul-23	8021B	
<b>Toluene*</b>	<b>1.42</b>		0.200	mg/kg	200	3071233	MS	13-Jul-23	8021B	
Ethylbenzene*	<0.200		0.200	mg/kg	200	3071233	MS	13-Jul-23	8021B	
<b>Total Xylenes*</b>	<b>41.6</b>		0.600	mg/kg	200	3071233	MS	13-Jul-23	8021B	GC-NC1
<b>Total BTEX</b>	<b>43.0</b>		1.20	mg/kg	200	3071233	MS	13-Jul-23	8021B	GC-NC1
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			247 %	71.5-134		3071233	MS	13-Jul-23	8021B	

**Petroleum Hydrocarbons by GC FID**

**S-04**

<b>GRO C6-C10*</b>	<b>1060</b>		10.0	mg/kg	1	3071236	MS	13-Jul-23	8015B	
<b>DRO &gt;C10-C28*</b>	<b>5440</b>		10.0	mg/kg	1	3071236	MS	13-Jul-23	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>796</b>		10.0	mg/kg	1	3071236	MS	13-Jul-23	8015B	
<i>Surrogate: 1-Chlorooctane</i>			207 %	48.2-134		3071236	MS	13-Jul-23	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			132 %	49.1-148		3071236	MS	13-Jul-23	8015B	

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**AH - 1 ( 5'-6' )  
H233551-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>3240</b>		16.0	mg/kg	4	3071315	AC	13-Jul-23	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

**S-04**

<b>Benzene*</b>	<b>7.94</b>		1.00	mg/kg	1000	3071233	MS	13-Jul-23	8021B	
<b>Toluene*</b>	<b>77.2</b>		1.00	mg/kg	1000	3071233	MS	13-Jul-23	8021B	
<b>Ethylbenzene*</b>	<b>23.5</b>		1.00	mg/kg	1000	3071233	MS	13-Jul-23	8021B	
<b>Total Xylenes*</b>	<b>149</b>		3.00	mg/kg	1000	3071233	MS	13-Jul-23	8021B	
<b>Total BTEX</b>	<b>258</b>		6.00	mg/kg	1000	3071233	MS	13-Jul-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			141 %	71.5-134		3071233	MS	13-Jul-23	8021B	
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**Petroleum Hydrocarbons by GC FID**

**S-04**

<b>GRO C6-C10*</b>	<b>4620</b>		10.0	mg/kg	1	3071236	MS	13-Jul-23	8015B	
<b>DRO &gt;C10-C28*</b>	<b>8920</b>		10.0	mg/kg	1	3071236	MS	13-Jul-23	8015B	
<b>EXT DRO &gt;C28-C36</b>	<b>1540</b>		10.0	mg/kg	1	3071236	MS	13-Jul-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			314 %	48.2-134		3071236	MS	13-Jul-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			200 %	49.1-148		3071236	MS	13-Jul-23	8015B	
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**Analytical Results For:**

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**AH - 2 ( 0-1' )**

**H233551-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>160</b>		16.0	mg/kg	4	3071315	AC	13-Jul-23	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	3071233	MS	18-Jul-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3071233	MS	18-Jul-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3071233	MS	18-Jul-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3071233	MS	18-Jul-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3071233	MS	18-Jul-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	71.5-134		3071233	MS	18-Jul-23	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	
<b>DRO &gt;C10-C28*</b>	<b>25.5</b>		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			92.5 %	48.2-134		3071236	MS	18-Jul-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			101 %	49.1-148		3071236	MS	18-Jul-23	8015B	
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**Analytical Results For:**

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**AH - 3 ( 0-1' )**

**H233551-05 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>32.0</b>		16.0	mg/kg	4	3071315	AC	13-Jul-23	4500-Cl-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3071233	MS	13-Jul-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			105 %	71.5-134		3071233	MS	13-Jul-23	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			94.1 %	48.2-134		3071236	MS	18-Jul-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			102 %	49.1-148		3071236	MS	18-Jul-23	8015B	
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**Analytical Results For:**

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**AH - 4 ( 0-1' )  
H233551-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>80.0</b>		16.0	mg/kg	4	3071315	AC	13-Jul-23	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3071233	MS	13-Jul-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			106 %	71.5-134		3071233	MS	13-Jul-23	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			93.6 %	48.2-134		3071236	MS	18-Jul-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			102 %	49.1-148		3071236	MS	18-Jul-23	8015B	
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**Analytical Results For:**

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**AH - 5 ( 0-1' )**

**H233551-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**

**Inorganic Compounds**

<b>Chloride</b>	<b>48.0</b>		16.0	mg/kg	4	3071315	AC	13-Jul-23	4500-CI-B	
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**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Toluene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	3071233	MS	13-Jul-23	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	3071233	MS	13-Jul-23	8021B	

<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			107 %	71.5-134		3071233	MS	13-Jul-23	8021B	
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**Petroleum Hydrocarbons by GC FID**

GRO C6-C10*	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	
<b>DRO &gt;C10-C28*</b>	<b>14.3</b>		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	3071236	MS	18-Jul-23	8015B	

<i>Surrogate: 1-Chlorooctane</i>			98.0 %	48.2-134		3071236	MS	18-Jul-23	8015B	
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<i>Surrogate: 1-Chlorooctadecane</i>			107 %	49.1-148		3071236	MS	18-Jul-23	8015B	
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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**Inorganic Compounds - Quality Control**

**Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 3071315 - 1:4 DI Water</b>										
<b>Blank (3071315-BLK1)</b>										
Prepared & Analyzed: 13-Jul-23										
Chloride	ND	16.0	mg/kg							
<b>LCS (3071315-BS1)</b>										
Prepared & Analyzed: 13-Jul-23										
Chloride	416	16.0	mg/kg	400		104	80-120			
<b>LCS Dup (3071315-BSD1)</b>										
Prepared & Analyzed: 13-Jul-23										
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: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**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
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**Batch 3071233 - Volatiles**

**Blank (3071233-BLK1)**

Prepared: 12-Jul-23 Analyzed: 13-Jul-23

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0524		mg/kg	0.0500		105	71.5-134			

**LCS (3071233-BS1)**

Prepared: 12-Jul-23 Analyzed: 13-Jul-23

Benzene	2.00	0.050	mg/kg	2.00		100	82.8-130			
Toluene	1.97	0.050	mg/kg	2.00		98.7	86-128			
Ethylbenzene	1.95	0.050	mg/kg	2.00		97.3	85.9-128			
m,p-Xylene	3.98	0.100	mg/kg	4.00		99.4	89-129			
o-Xylene	1.94	0.050	mg/kg	2.00		96.8	86.1-125			
Total Xylenes	5.91	0.150	mg/kg	6.00		98.6	88.2-128			
Surrogate: 4-Bromofluorobenzene (PID)	0.0488		mg/kg	0.0500		97.6	71.5-134			

**LCS Dup (3071233-BSD1)**

Prepared: 12-Jul-23 Analyzed: 13-Jul-23

Benzene	2.02	0.050	mg/kg	2.00		101	82.8-130	0.826	15.8	
Toluene	2.00	0.050	mg/kg	2.00		100	86-128	1.56	15.9	
Ethylbenzene	1.98	0.050	mg/kg	2.00		99.1	85.9-128	1.79	16	
m,p-Xylene	4.02	0.100	mg/kg	4.00		101	89-129	1.14	16.2	
o-Xylene	1.98	0.050	mg/kg	2.00		98.8	86.1-125	2.04	16.7	
Total Xylenes	6.00	0.150	mg/kg	6.00		100	88.2-128	1.44	16.3	
Surrogate: 4-Bromofluorobenzene (PID)	0.0502		mg/kg	0.0500		100	71.5-134			

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**Analytical Results For:**

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: WINDWARD FEDERAL COM 001H Project Number: 212C - MD - 03162 Project Manager: CHRISTIAN LLULL Fax To: (432) 682-3946	Reported: 31-Oct-23 09:06
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**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
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**Batch 3071236 - General Prep - Organics**

**Blank (3071236-BLK1)** Prepared: 12-Jul-23 Analyzed: 13-Jul-23

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
<i>Surrogate: 1-Chlorooctane</i>	54.3		mg/kg	49.6		110	48.2-134			
<i>Surrogate: 1-Chlorooctadecane</i>	59.4		mg/kg	50.0		119	49.1-148			

**LCS (3071236-BS1)** Prepared: 12-Jul-23 Analyzed: 14-Jul-23

GRO C6-C10	204	10.0	mg/kg	200		102	66.4-123			
DRO >C10-C28	199	10.0	mg/kg	200		99.6	66.5-118			
Total TPH C6-C28	404	10.0	mg/kg	400		101	77.6-123			
<i>Surrogate: 1-Chlorooctane</i>	65.0		mg/kg	49.6		131	48.2-134			
<i>Surrogate: 1-Chlorooctadecane</i>	69.2		mg/kg	50.0		138	49.1-148			

**LCS Dup (3071236-BSD1)** Prepared: 12-Jul-23 Analyzed: 14-Jul-23

GRO C6-C10	201	10.0	mg/kg	200		101	66.4-123	1.38	17.7	
DRO >C10-C28	190	10.0	mg/kg	200		94.9	66.5-118	4.84	21	
Total TPH C6-C28	391	10.0	mg/kg	400		97.8	77.6-123	3.07	18.5	
<i>Surrogate: 1-Chlorooctane</i>	59.8		mg/kg	49.6		121	48.2-134			
<i>Surrogate: 1-Chlorooctadecane</i>	61.8		mg/kg	50.0		124	49.1-148			

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

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

**BILL TO**

**ANALYSIS REQUEST**

Project Manager: Christian Lull  
 Address: 8911 Capital o Texas Hwy, Suite 2310  
 City: Austin State: TX Zip:  
 Phone #: (512)565-0190 Fax #:  
 Project #: 212C-MD-03162 Project Owner: ConocoPhillips  
 Project Name: Windward Federal Com 001H Flowline Release  
 Project Location: Lea County, New Mexico  
 Sampler Name: Colton Bickerstaff  
 P.O. #: Company: Tetra Tech  
 Attn: Christian Lull  
 Address: EMAIL  
 City: State: Zip:  
 Phone #: Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX										DATE	TIME	TPH 8015M	BTEX 8021B	Chloride SM4500CI-B
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	PRESERV.					
1	AH-1 (0-5-1)	G 1	X															
2	AH-1 (3-4)	G 1	X															
3	AH-1 (5-6)	G 1	X															
4	SW-1 AH-2 (0-1)	G 1	X															
5	SW-2 AH-3 (0-1)	G 1	X															
6	SW-3 AH-4 (0-1)	G 1	X															
7	SW-4 AH-5 (0-1)	G 1	X															

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Relinquished By: Colton Bickerstaff Date: 7/12/23 Received By: [Signature] Date: 7/12/23  
 Relinquished By: [Signature] Date: 7/12/23 Received By: [Signature] Date: 7/12/23  
 Delivered By: (Circle One) Sampler - UPS - Bus - Other: Sample Condition: Cool  Hot  Corrected Temp. °C: 23  
 CHECKED BY: [Signature] (Initials)  
 REMARKS: \* Customer requested Sample ID changes. To 10/27/23  
 Turnaround Time: Standard  Backlog  of Sample Condition: Cool  Hot   
 Thermometer ID: #140  
 Correction Factor: 0.00  
 Observed Temp. °C: 23  
 Corrected Temp. °C: 23  
 Verbal Result:  Yes  No Add'l Phone #: [Blank]  
 All Results are emailed. Please provide Email address: Christian.Lull@tetratech.com  
 FORM-006 R 3.2 10/07/21

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



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September 18, 2023

SAM ABBOTT

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: WINDWARD FEDERAL COM 001H FL RELEASE

Enclosed are the results of analyses for samples received by the laboratory on 09/13/23 13:00.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, flowing "C" at the beginning.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	WINDWARD FEDERAL COM 001H FL REI	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03162	Sample Received By:	Dionica Hinojos
Project Location:	COP - LEA CO NM		

**Sample ID: BH - 1 (0-1') (H234938-01)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.6	2.00	2.77	
<b>Toluene*</b>	<b>0.248</b>	0.050	09/15/2023	ND	1.89	94.7	2.00	2.71	
<b>Ethylbenzene*</b>	<b>0.354</b>	0.050	09/15/2023	ND	1.95	97.3	2.00	1.97	
<b>Total Xylenes*</b>	<b>6.17</b>	0.150	09/15/2023	ND	5.49	91.5	6.00	3.20	
<b>Total BTEX</b>	<b>6.77</b>	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 179 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>96.0</b>	16.0	09/14/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>309</b>	10.0	09/14/2023	ND	195	97.3	200	2.70	
<b>DRO &gt;C10-C28*</b>	<b>4920</b>	10.0	09/14/2023	ND	208	104	200	4.95	
<b>EXT DRO &gt;C28-C36</b>	<b>830</b>	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 165 % 48.2-134

Surrogate: 1-Chlorooctadecane 252 % 49.1-148

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**Analytical Results For:**

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

Received:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	WINDWARD FEDERAL COM 001H FL REI	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03162	Sample Received By:	Dionica Hinojos
Project Location:	COP - LEA CO NM		

**Sample ID: BH - 1 (2'-3') (H234938-02)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	09/15/2023	ND	1.81	90.6	2.00	2.77	
<b>Toluene*</b>	<b>3.52</b>	0.200	09/15/2023	ND	1.89	94.7	2.00	2.71	
<b>Ethylbenzene*</b>	<b>2.95</b>	0.200	09/15/2023	ND	1.95	97.3	2.00	1.97	
<b>Total Xylenes*</b>	<b>25.3</b>	0.600	09/15/2023	ND	5.49	91.5	6.00	3.20	
<b>Total BTEX</b>	<b>31.7</b>	1.20	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 251 % 71.5-134

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>528</b>	16.0	09/14/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>568</b>	10.0	09/14/2023	ND	195	97.3	200	2.70	
<b>DRO &gt;C10-C28*</b>	<b>5440</b>	10.0	09/14/2023	ND	208	104	200	4.95	
<b>EXT DRO &gt;C28-C36</b>	<b>878</b>	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 173 % 48.2-134

Surrogate: 1-Chlorooctadecane 280 % 49.1-148

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**Analytical Results For:**

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

Received:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	WINDWARD FEDERAL COM 001H FL REI	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03162	Sample Received By:	Dionica Hinojos
Project Location:	COP - LEA CO NM		

**Sample ID: BH - 1 (4'-5') (H234938-03)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>0.647</b>	0.200	09/15/2023	ND	1.81	90.6	2.00	2.77	
<b>Toluene*</b>	<b>17.0</b>	0.200	09/15/2023	ND	1.89	94.7	2.00	2.71	
<b>Ethylbenzene*</b>	<b>6.68</b>	0.200	09/15/2023	ND	1.95	97.3	2.00	1.97	
<b>Total Xylenes*</b>	<b>46.3</b>	0.600	09/15/2023	ND	5.49	91.5	6.00	3.20	
<b>Total BTEX</b>	<b>70.6</b>	1.20	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 283 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>832</b>	16.0	09/14/2023	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>703</b>	10.0	09/14/2023	ND	195	97.3	200	2.70	
<b>DRO &gt;C10-C28*</b>	<b>5100</b>	10.0	09/14/2023	ND	208	104	200	4.95	
<b>EXT DRO &gt;C28-C36</b>	<b>827</b>	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 168 % 48.2-134

Surrogate: 1-Chlorooctadecane 286 % 49.1-148

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**Analytical Results For:**

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

Received:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	WINDWARD FEDERAL COM 001H FL REI	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03162	Sample Received By:	Dionica Hinojos
Project Location:	COP - LEA CO NM		

**Sample ID: BH - 1 (6'-7') (H234938-04)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	09/15/2023	ND	1.81	90.6	2.00	2.77	
<b>Toluene*</b>	<b>3.37</b>	0.200	09/15/2023	ND	1.89	94.7	2.00	2.71	
<b>Ethylbenzene*</b>	<b>2.77</b>	0.200	09/15/2023	ND	1.95	97.3	2.00	1.97	
<b>Total Xylenes*</b>	<b>17.3</b>	0.600	09/15/2023	ND	5.49	91.5	6.00	3.20	
<b>Total BTEX</b>	<b>23.5</b>	1.20	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 224 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>336</b>	16.0	09/14/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>621</b>	10.0	09/14/2023	ND	195	97.3	200	2.70	
<b>DRO &gt;C10-C28*</b>	<b>6330</b>	10.0	09/14/2023	ND	208	104	200	4.95	
<b>EXT DRO &gt;C28-C36</b>	<b>996</b>	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 178 % 48.2-134

Surrogate: 1-Chlorooctadecane 283 % 49.1-148

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	WINDWARD FEDERAL COM 001H FL REI	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03162	Sample Received By:	Dionica Hinojos
Project Location:	COP - LEA CO NM		

**Sample ID: BH - 1 (8'-9') (H234938-05)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	09/15/2023	ND	1.81	90.6	2.00	2.77	
<b>Toluene*</b>	<b>4.56</b>	0.500	09/15/2023	ND	1.89	94.7	2.00	2.71	
<b>Ethylbenzene*</b>	<b>3.09</b>	0.500	09/15/2023	ND	1.95	97.3	2.00	1.97	
<b>Total Xylenes*</b>	<b>20.8</b>	1.50	09/15/2023	ND	5.49	91.5	6.00	3.20	
<b>Total BTEX</b>	<b>28.5</b>	3.00	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 166 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>240</b>	16.0	09/14/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>994</b>	50.0	09/14/2023	ND	195	97.4	200	2.16	
<b>DRO &gt;C10-C28*</b>	<b>9780</b>	50.0	09/14/2023	ND	201	100	200	1.87	
<b>EXT DRO &gt;C28-C36</b>	<b>1530</b>	50.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 251 % 48.2-134

Surrogate: 1-Chlorooctadecane 200 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	WINDWARD FEDERAL COM 001H FL REI	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03162	Sample Received By:	Dionica Hinojos
Project Location:	COP - LEA CO NM		

**Sample ID: BH - 1 (9'-10') (H234938-06)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Benzene*</b>	<b>1.32</b>	0.500	09/15/2023	ND	1.81	90.6	2.00	2.77	
<b>Toluene*</b>	<b>17.1</b>	0.500	09/15/2023	ND	1.89	94.7	2.00	2.71	
<b>Ethylbenzene*</b>	<b>5.84</b>	0.500	09/15/2023	ND	1.95	97.3	2.00	1.97	
<b>Total Xylenes*</b>	<b>38.7</b>	1.50	09/15/2023	ND	5.49	91.5	6.00	3.20	
<b>Total BTEX</b>	<b>62.9</b>	3.00	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 169 % 71.5-134

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>256</b>	16.0	09/14/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>1030</b>	10.0	09/14/2023	ND	195	97.4	200	2.16	
<b>DRO &gt;C10-C28*</b>	<b>7540</b>	10.0	09/14/2023	ND	201	100	200	1.87	
<b>EXT DRO &gt;C28-C36</b>	<b>1210</b>	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 216 % 48.2-134

Surrogate: 1-Chlorooctadecane 159 % 49.1-148

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	WINDWARD FEDERAL COM 001H FL REI	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03162	Sample Received By:	Dionica Hinojos
Project Location:	COP - LEA CO NM		

**Sample ID: BH - 1 (12'-13') (H234938-07)**

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.6	2.00	2.77	
<b>Toluene*</b>	<b>0.621</b>	0.050	09/15/2023	ND	1.89	94.7	2.00	2.71	
<b>Ethylbenzene*</b>	<b>0.511</b>	0.050	09/15/2023	ND	1.95	97.3	2.00	1.97	
<b>Total Xylenes*</b>	<b>3.86</b>	0.150	09/15/2023	ND	5.49	91.5	6.00	3.20	
<b>Total BTEX</b>	<b>4.99</b>	0.300	09/15/2023	ND					

Surrogate: 4-Bromofluorobenzene (PID) 210 % 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
<b>Chloride</b>	<b>80.0</b>	16.0	09/14/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>GRO C6-C10*</b>	<b>108</b>	10.0	09/14/2023	ND	195	97.4	200	2.16	
<b>DRO &gt;C10-C28*</b>	<b>1890</b>	10.0	09/14/2023	ND	201	100	200	1.87	
<b>EXT DRO &gt;C28-C36</b>	<b>339</b>	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 126 % 48.2-134

Surrogate: 1-Chlorooctadecane 114 % 49.1-148

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**Analytical Results For:**

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

Received:	09/13/2023	Sampling Date:	09/12/2023
Reported:	09/18/2023	Sampling Type:	Soil
Project Name:	WINDWARD FEDERAL COM 001H FL REI	Sampling Condition:	Cool & Intact
Project Number:	212C - MD - 03162	Sample Received By:	Dionica Hinojos
Project Location:	COP - LEA CO NM		

**Sample ID: BH - 1 (14'-15') (H234938-08)**

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/15/2023	ND	1.81	90.6	2.00	2.77	
Toluene*	<0.050	0.050	09/15/2023	ND	1.89	94.7	2.00	2.71	
Ethylbenzene*	<0.050	0.050	09/15/2023	ND	1.95	97.3	2.00	1.97	
<b>Total Xylenes*</b>	<b>0.200</b>	0.150	09/15/2023	ND	5.49	91.5	6.00	3.20	
Total BTEX	<0.300	0.300	09/15/2023	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>112</b>	16.0	09/14/2023	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/14/2023	ND	195	97.4	200	2.16	
<b>DRO &gt;C10-C28*</b>	<b>54.0</b>	10.0	09/14/2023	ND	201	100	200	1.87	
<b>EXT DRO &gt;C28-C36</b>	<b>15.0</b>	10.0	09/14/2023	ND					

Surrogate: 1-Chlorooctane 120 % 48.2-134

Surrogate: 1-Chlorooctadecane 143 % 49.1-148

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

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Tetra Tech  
 Project Manager: Sam Abbott  
 Address: 8911 Capital o Texas Hwy, Suite 2310  
 City: Austin State: TX Zip:  
 Phone #: (512)565-0190 Fax #:  
 Project #: 212C-MD-03162 Project Owner: ConocoPhillips  
 Project Name: Windward Federal Com #001H Flowline Release  
 Project Location: Lea County, New Mexico  
 Sampler Name: Colton Bickerstaff  
 P.O. #: Company: Tetra Tech  
 Attn: Sam Abbott  
 Address: EMAIL  
 City: State: Zip:  
 Phone #: Fax #:

FOR LAB USE ONLY  
 Lab I.D. **HB24138** Sample I.D.  
 (G)RAB OR (C)OMP.  
 # CONTAINERS  
 MATRIX: GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER: ACID/BASE:  
 PRESERV. ICE / COOL, OTHER:  
 DATE TIME  
 TPH 8015M  
 BTEX 8021B  
 Chloride SM4500CI-B  
 HOLD

Lab I.D.	Sample I.D.	DATE	TIME	TPH 8015M	BTEX 8021B	Chloride SM4500CI-B	HOLD
1	BH-1 (0-1')	9/12/2023		X	X	X	
2	BH-1 (2-3')	9/12/2023		X	X	X	
3	BH-1 (4-5')	9/12/2023		X	X	X	
4	BH-1 (6-7')	9/12/2023		X	X	X	
5	BH-1 (8-9')	9/12/2023		X	X	X	
6	BH-1 (9'-10')	9/12/2023		X	X	X	
7	BH-1 (12-13')	9/12/2023		X	X	X	
8	BH-1 (14-15')	9/12/2023		X	X	X	
9	BH-1 (19-20')	9/12/2023		X	X	X	
10	BH-1 (24-25')	9/12/2023		X	X	X	

Refrigerator, cooling and other conditions should be maintained for any claim arising under this contract or bill, until the results of the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits, incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated causes or otherwise.

Reinquinshed By: Colton Bickerstaff  
 Date: 9/13/23  
 Time: 13:00  
 Received By: *[Signature]*  
 Date: *[Signature]*  
 Time: *[Signature]*

Delivered By: (Circle One)  
 Carrier - UPS - Bus - Other:  
 Observed Temp. °C: 1.0°C  
 Corrected Temp. °C:  
 Sample Contaminant:  
 Cool / Melt:  Yes  No  
 Checked By: *[Signature]* (Initials)  
 Turnaround Time: Standard  Rush  *1.50*  
 Bacteria (col) Sample Condition:  Cool  Heat  
 Observed Temp. °C:  Yes  No  
 Thermometer ID: *4445*  
 Correction Factor: -0.5°C  Yes  No  
 Corrected Temp. °C:  Yes  No

Verbal Results:  Yes  No  
 All Results are emailed. Please provide Email address: Sam.Abbott@tetratech.com  
 Add'l Phone #:  
 REMARKS: PLEASE HOLD 19'-20' & 24'-25' samples

FORM-006 R.3.2 1007/21  
 Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinalabsnm.com

# **APPENDIX F WASTE MANIFEST**



WEIGHT TICKET

Ticket # 199991
Start: 10/17/2023 11:55 AM
End: 10/17/2023 12:00 PM
By: DWL.Ivan

GROSS TARE NET PRICE AMOUNT

Contaminated Soil
18 CO 18 \$0.01 \$0.18

Hauler: McNabb Partners
Driver: Josh Busby
Lease: Windward Fed
Well: OC1H
AFE #: N/A
County, State: LEA (NM)
API #: 6002541414
Manifest #: N/A
Client Company Man: Jacob Laird
Rig Name & Number: N/A
Trucking Co Ticket #: N/A
Truck Type: End Dump
UOM: CUyd
UOM Count: 18
PF Test Result: Pass
H2S Test: Pass

H2S Testing - PASS
01 CO 01 \$0.00 \$0.00

Paint Filter - PASS
01 CO 01 \$0.00 \$0.00

NORM - PASS
01 CO 01 \$0.00 \$0.00

Additional Photos
01 CO 01 \$0.00 \$0.00

22 \$0.01 \$0.18

SUBTOTAL ----> \$0.18
TAX ----> \$0.01
ROUNDING ----> \$0.00
TOTAL ----> \$0.19

Handwritten signature

Customer: ConocoPhillips Company
Driver: Kieran Work
IC# / License: 000



Customer Copy

WEIGHT TICKET

Ticket # 200002  
Start: 10/17/2023 01:29 PM  
End: 10/17/2023 01:39 PM  
By: DWL.Ivan

GROSS	TARE	NET	PRICE	AMOUNT
Contaminated Soil				
18	00	18	\$0.01	\$0.18

Hauler: McNabb Partners  
 Driver: Josh Busby  
 Lease: Windward Fed  
 Well: 001H  
 AFE #: N/A  
 County, State: LEA (NM)  
 API #: 3002541414  
 Client Company Man: Jacob Laird  
 Rig Name & Number: N/A  
 Trucking Co Ticket #: N/A  
 Truck Type: End Dump  
 UOM: CuYd  
 UOM Count: 18  
 PF Test Result: Pass  
 H2S Test: Pass

H2S Testing - PASS				
C1	00	01	\$0.00	\$0.00

Paint Filter - PASS				
C1	00	01	\$0.00	\$0.00

NORM - PASS				
C1	00	01	\$0.00	\$0.00

Additional Photos				
C1	00	01	\$0.00	\$0.00

22			\$0.01	\$0.18
----	--	--	--------	--------

SUBTOTAL ----> \$0.18  
 TAX ----> \$0.01  
 ROUNDING ----> \$0.00  
 TOTAL ----> \$0.19

Customer: ConocoPhillips Company  
 Driver: Karen Work  
 ID/License:



Customer Copy

-----WEIGHT TICKET-----

Ticket # 200025

Start: 10/17/2023 03:06 PM

End: 10/17/2023 03:13 PM

By: owl.leslie

GROSS	TARE	NET	PRICE	AMOUNT
Contaminated Soil				
18	00	18	\$0.01	\$0.18

Hauler: McNabb  
 Driver: Josh Busty  
 Lease: Windward Federal  
 Well: OC14  
 AFE #: N/A  
 County, State: LEA (NM)  
 API #: N/A  
 Manifest #: N/A  
 Client Company Man: Jacob Laird  
 Rig Name & Number: N/A  
 Trucking Co Ticket #: N/A  
 Truck Type: End Dump/ M-80  
 UOM: CuYd  
 UOM Count: 18  
 PF Test Result: Pass  
 H2S Test: Pass

H2S Testing - PASS				
01	00	01	\$0.00	\$0.00

Paint Filter - PASS				
01	00	01	\$0.00	\$0.00

NORM - PASS				
01	00	01	\$0.00	\$0.00

Additional Photos				
01	00	01	\$0.00	\$0.00

22			\$0.01	\$0.18
----	--	--	--------	--------

SUBTOTAL	---->	\$0.18
TAX	---->	\$0.01
ROUNDING	---->	\$0.00
TOTAL	---->	\$0.19

Customer: ConocoPhillips Company  
 Driver: Karen Work  
 ID/License:



Customer Copy

WEIGHT TICKET

Ticket # 200164

Start: 10/18/2023 11:06 AM

End: 10/18/2023 11:14 AM

By: owl.geraldine

GROSS	TARE	NET	PRICE	AMOUNT
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Contaminated Soil	18	CO	18	\$0.01	\$0.18
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Hauler: McNabb Partners

Driver: Josh Busty

Lease: Windward Fed

Well: OCTH

AFE #: N/A

County, State: LEA (NM)

API #: 3002541414

Client Company Man: Jacob Laird

Rig Name & Number: N/A

Trucking Co Ticket #: N/A

Truck Type: End Dump

LOM: Durd

LOM Count: 18

PF Test Result: Pass

H2S Test: Pass

H2S Testing - PASS	C1	CO	01	\$0.00	\$0.00
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Paint Filter - PASS	C1	CO	01	\$0.00	\$0.00
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NORM - PASS	C1	CO	01	\$0.00	\$0.00
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Additional Photos	C1	CO	01	\$0.00	\$0.00
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22				\$0.01	\$0.18
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SUBTOTAL	---->	\$0.18
TAX	---->	\$0.01
ROUNDING	---->	\$0.00
TOTAL	---->	\$0.19

Customer: ConocoPhillips Company

Driver: Karen Work

ID/License:



Customer Copy

WEIGHT TICKET

Ticket # 200180

Start: 10/18/2023 12:40 PM

End: 10/18/2023 12:49 PM

By: OWL Ivan

GROSS	TARE	NET	PRICE	AMOUNT
Contaminated Soil				
18	00	18	\$0.01	\$0.18

Hauler: McNabb Partners  
 Driver: Josh Busby  
 Lease: Windward Fed  
 Well: OC1H  
 AFE #: N/A  
 County, State: LEA (NM)  
 API #: 2002541414  
 Client Company Man: Jacob Laird  
 Rig Name & Number: N/A  
 Trucking Co Ticket #: N/A  
 Truck Type: End Dump  
 UOM: Cuyd  
 UOM Count: 18  
 PF Test Result: Pass  
 H2S Test: Pass

H2S Testing - PASS				
01	00	01	\$0.00	\$0.00

Paint Filter - PASS				
01	00	01	\$0.00	\$0.00

NORM - PASS				
01	00	01	\$0.00	\$0.00

Additional Photos				
01	00	01	\$0.00	\$0.00

22			\$0.01	\$0.18
----	--	--	--------	--------

SUBTOTAL ----> \$0.18  
 TAX ----> \$0.01  
 ROUNDING ----> \$0.00  
 TOTAL ----> \$0.19

Customer: ConocoPhillips Company  
 Driver: Karen Work  
 ID/License:



Customer Copy

WEIGHT TICKET

Ticket # 200196  
Start: 10/18/2023 02:10 PM  
End: 10/18/2023 02:19 PM  
By: DWL, Ivan

GROSS	TARE	NET	PRICE	AMOUNT
Contaminated Soil				
18	00	18	\$0.01	\$0.18
Hauler: McNabb Partners Driver: Josh Busby Lease: Windward Fed Well: 001H AFE #: N/A County, State: LEA (NM) API #: 5002541414 Client Company Man: Jacob Laird Rig Name & Number: N/A Trucking Co Ticket #: N/A Truck Type: End Dump UDM: DuYd UDM Count: 18 PF Test Result: Pass H2S Test: Pass				
H2S Testing - PASS				
01	00	01	\$0.00	\$0.00
Paint Filter - PASS				
01	00	01	\$0.00	\$0.00
NORM - PASS				
01	00	01	\$0.00	\$0.00
Additional Photos				
01	00	01	\$0.00	\$0.00
22			\$0.01	\$0.18
SUE TOTAL --->				\$0.18
TAX --->				\$0.01
ROUNDING --->				\$0.00
TOTAL --->				\$0.19

Customer: ConocoPhillips Company  
Driver: Karen Work  
ID/License:

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

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

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

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

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

CONDITIONS  
 Action 288337

**CONDITIONS**

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 288337
	Action Type: [C-141] Release Corrective Action (C-141)

**CONDITIONS**

Created By	Condition	Condition Date
scott.rodgers	None	1/12/2024