SITE INFORMATION

Report Type: Closure Report

General Site Information:						
Site:	**Windward Federal #2H**					
Company:	**COG Operating, LLC**					
Section, Township and Range	**Unit I**	**Sec. 12**	**T 24S**	**R 31E**		
Lease Number:						
County:	**Lea County**					
GPS:	**32.23074**			**-103.7233**		
Surface Owner:	**Federal**					
Directions:	From the intersection of Hwy 128 and Buck Jackson Road, Turn South on Buck Jackson road and go .46 miles and location is on the West side.					

Release Data:	
Date Released:	7/10/2019
Type Release:	Produced Water
Source of Contamination:	Flowline
Fluid Released:	30 bbl water
Fluids Recovered:	0 bbls water

Official Communication:			
Name:	Ike Tavarez		Mike Carmona
Company:	COG Operating, LLC		Tetra Tech
Address:	One Concho Center		901 West Wall Street
	600 W. Illinois Ave.		Suite 100
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 687-8110
Fax:	(432) 684-7137		
Email:	itavarez@concho.com		mike.carmona@tetratech.com

Site Characterization	
Depth to Groundwater:	*160' Below Surface*
Karst Potential:	*Low*

Recommended Remedial Action Levels (RRALs)				
Benzene	***Total BTEX***	***TPH (GRO+DRO)***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*1000 mg/kg*	*2,500 mg/kg*	*20,000 mg/kg*

TETRA TECH

July 7, 2020

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

Re: Closure Report for the COG Operating, LLC, Windward Federal #2H, Unit I, Section 12, Township 24 South, Range 31 East, Lea County, New Mexico.

To whom it may concern:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG) to assess a release that occurred at the Windward Federal #2H, Unit I, Section 12, Township 24 South, Range 31 East, Lea County, New Mexico (Site). The spill site coordinates are 32.23074°, -103.72330°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on July 10, 2019, and released approximately 30 barrels of produced water due to a ruptured flowline. No produced water was recovered. The release impacted a pasture impacting an area measuring approximately 205' x 100'. The initial C-141 Form is included in Appendix A.

Site Characterization

No water wells were listed within Section 12 on the New Mexico Office of the State Engineer's (NMOSE) database, the Geology and Groundwater Resources of Eddy County (Report 3), or the USGS National Water Information Database. The nearest well is listed in Township 24 South, Range 31 East, Section 2, on the USGS National Water Information Database website, approximately 1.96 miles Northwest of the Site, and has a reported depth to groundwater of 160' below surface. The groundwater data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the site following the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. A Site characterization was performed for the site, and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or

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floodplains are located within the specified distances. Additionally, the site is located in a low karst potential area. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based on the site characterization, the proposed RRAL for TPH is 2,500 mg/kg (GRO + DRO + MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 20,000 mg/kg.

Soil Assessment and Analytical Results

On October 15, 2019, Tetra Tech personnel were onsite to evaluate and sample the release area. A total of seven (7) auger holes (AH-1 through AH-7) were installed in the release area to total depths ranging from 2-2.5' to 6-6.5' below surface. Soil samples were collected and submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

Auger Holes

Referring to Table 1, all analyzed samples showed benzene, total BTEX, and TPH concentrations below the laboratory reporting limits. Additionally, none of the samples collected showed any chloride concentrations above the RRAL based on site characterization, with concentrations ranging from below the laboratory reporting limits to 9,090 mg/kg. Although, the top 4.0' of soil will be held to the most stringent RRALs.

SAMPLING EVENTS

2nd Sampling Event

Based on the area having a heavy rainfall event, Tetra Tech personnel were onsite December 5, 2019, to re-sample the areas of auger holes (AH-1 AH-2, AH-3, AH-4, and AH-6). The five (5) auger holes that were installed in the release range from surface to 6.0'-6.5' below surface.

The rain has significantly helped dilute or help migrate the chloride concentrations during those events. The soil samples were collected and submitted to the laboratory for chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C, and sampling summarized in Table 1. The sample locations are shown on Figure 3.

Referring to Table 1, the area of auger holes (AH-1 and AH-2) showed chloride concentrations below the RRALs. The area of auger holes (AH-3, AH-4, AH-6) showed chloride concentration highs of 1,030 mg/kg, 4,410 mg/kg, and 5,420 mg/kg, respectively. Based on the data supported from the second event of sampling, the rain events have showed to help the chloride concentrations decrease over time.

TETRA TECH

3rd and 4th Sampling Event

Tetra Tech personnel were onsite February 11, 2020, to re-sample the areas of auger holes (AH-3, AH-4, and AH-6). The three (3) auger holes that were installed in the release range from the surface to 4.0'-4.5' below surface.

Referring to Table 1, the area of auger hole (AH-6) showed chloride concentrations below the RRALs. However, the area of auger holes (AH-3 and AH-4) showed chloride concentration highs of 1,500 mg/kg and 5,200 mg/kg, respectively.

Tetra Tech personnel were onsite April 9, 2020 to re-sample the area of auger hole (AH-4). The area of AH-4 that was installed in the release area, ranged from surface to 4.0'-4.5' below surface.

Referring to Table 1, the area of auger hole (AH-4) showed chloride concentrations below the RRALs.

Remediation Activities

Tetra Tech personnel were onsite June 25, 2020, to supervise the remediation activities and remediate the site using a hydro-vac due to all the lines in the area. The area of auger hole (AH-3) was excavated to depths a of 2.0' below surface, respectively. A total of one (1) bottom hole sample were collected (BottomHole-1) and four (4) sidewall samples (NSW-1, ESW-1, WSW-1, and SSW-1) were collected every 200 square feet for documentation purposes. All collected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The excavation depths and confirmation sample locations are shown on Figure 4.

Referring to Table 1, none of the samples collected showed benzene, total BTEX, chloride, or TPH concentrations above the RRALs.

Once the reclamation activities were completed, the excavated areas were backfilled with clean material to surface grade. Approximately 8 cubic yards of material was hauled for proper disposal.

Conclusion

In addition, the remaining impact in the pasture did not show any concentrations above the RRAL or reclamation standards, which appear to have been affected by the heavy rains in the area.

Based on the results, COG requests closure of this spill issue. The final C-141 is included in Appendix A. If you have any questions or comments concerning the assessment activities for this site, please call at (432) 682-4559.

TETRA TECH

Respectfully submitted,
TETRA TECH

Mike Carmona,
Geologist

Figures

SITE LOCATION

N
W E
S

0 10,416.5 20,833

Approximate Scale in Feet

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

STATE LOCATOR MAP

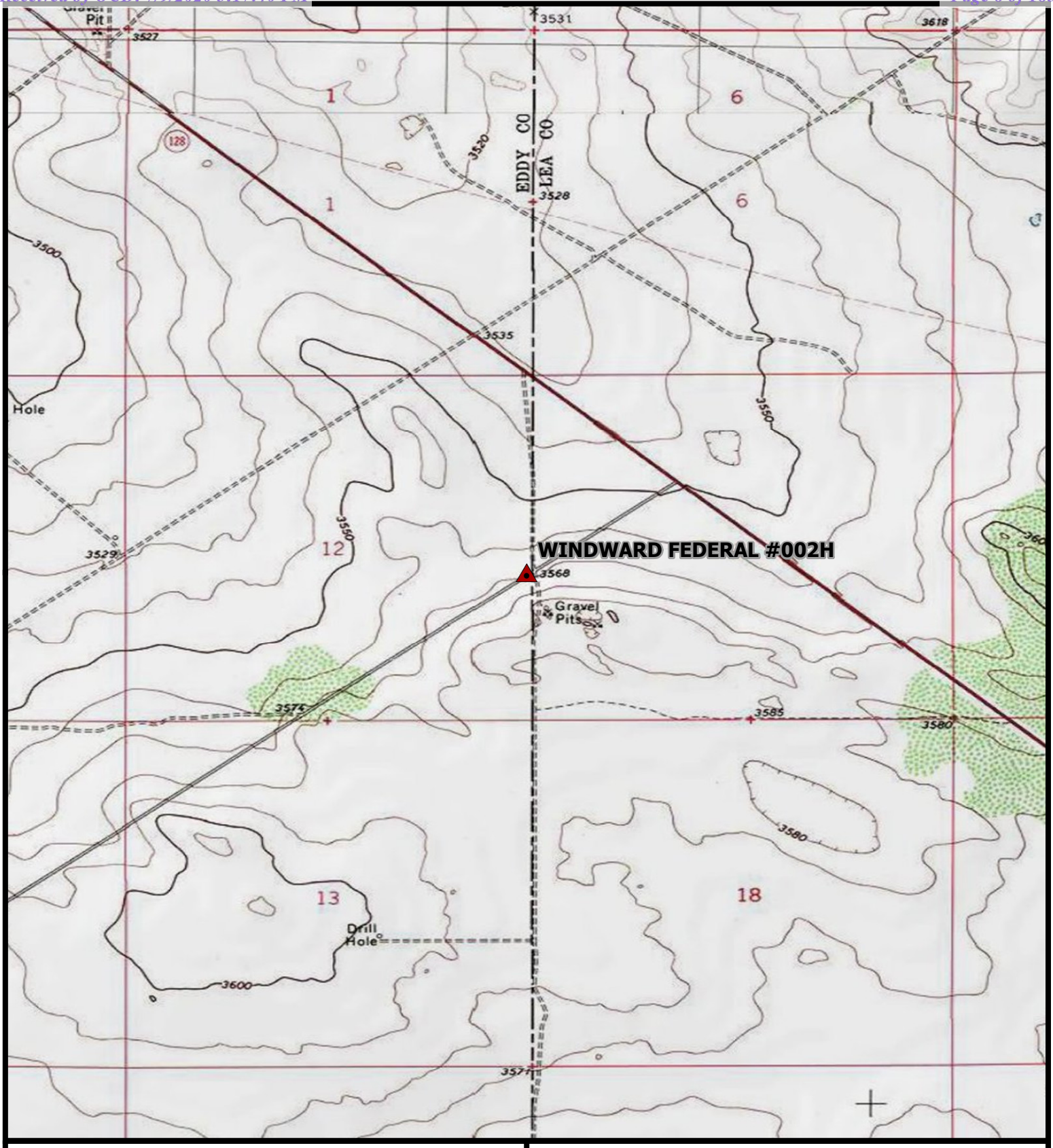
OVERVIEW MAP
WINDWARD FEDERAL #002H
Property Located at coordinates 32.23074°,-103.72330°
LEA COUNTY, NEW MEXICO

CONCHO

Project #:
212C-MD-01961
Date: 12-16-2019

FIGURE
1

Document Path: H:\GIS\CONCHO RESOURCES - COG\212C-MD-01961 WINDWARD FEDERAL #002H\MXD\212C-MD-01961 WINDWARD FEDERAL #002H FIG. 1.mxd



SITE LOCATION

N
W E
S

0 1,000 2,000
Approximate Scale in Feet

Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed

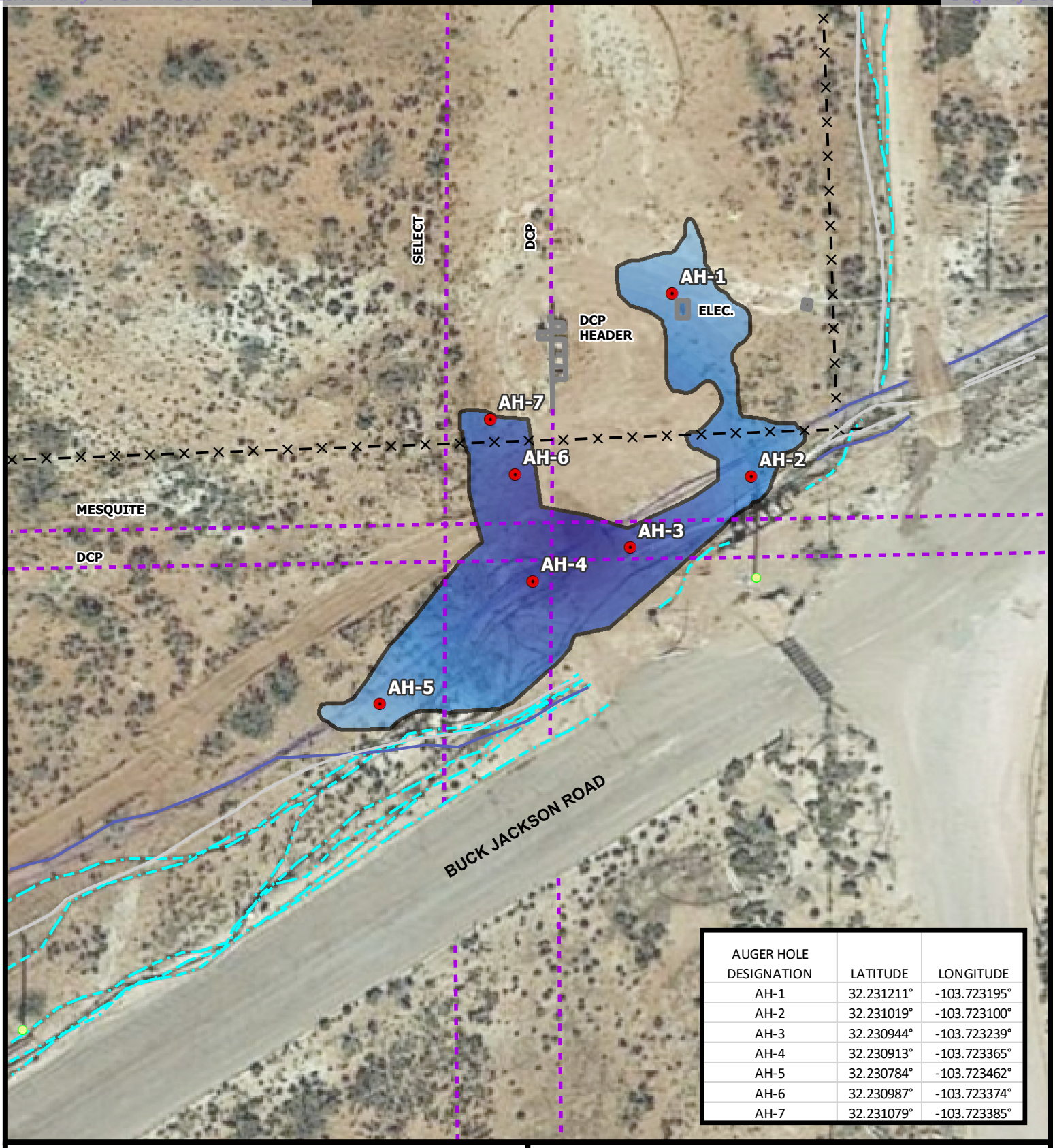
TOPOGRAPHIC MAP
WINDWARD FEDERAL #002H
Property Located at coordinates 32.23074°,-103.72330°
LEA COUNTY, NEW MEXICO

CONCHO

Project #:
212C-MD-01961
Date: 12-16-2019

FIGURE
2

Date: 12/16/2019 Document Path: H:\GIS\CONCHO RESOURCES - COG\212C-MD-01961 WINDWARD FEDERAL #002H\MXD\212C-MD-01961 WINDWARD FEDERAL #002H FIG. 2.mxd



AUGER HOLE DESIGNATION	LATITUDE	LONGITUDE
AH-1	32.231211°	-103.723195°
AH-2	32.231019°	-103.723100°
AH-3	32.230944°	-103.723239°
AH-4	32.230913°	-103.723365°
AH-5	32.230784°	-103.723462°
AH-6	32.230987°	-103.723374°
AH-7	32.231079°	-103.723385°

AUGERHOLE SAMPLE LOCATIONS
POWERPOLE
EQUIPMENT
FENCE
FLOWLINES
BURIED PIPELINE
AFFECTED SPILL AREA

N
W E
S

0 25 50
Approximate Scale in Feet

Source: "New Mexico". 32°13'50.66"N, 103°43'23.88"W. **Google Earth**. November 2017. December 16, 2019

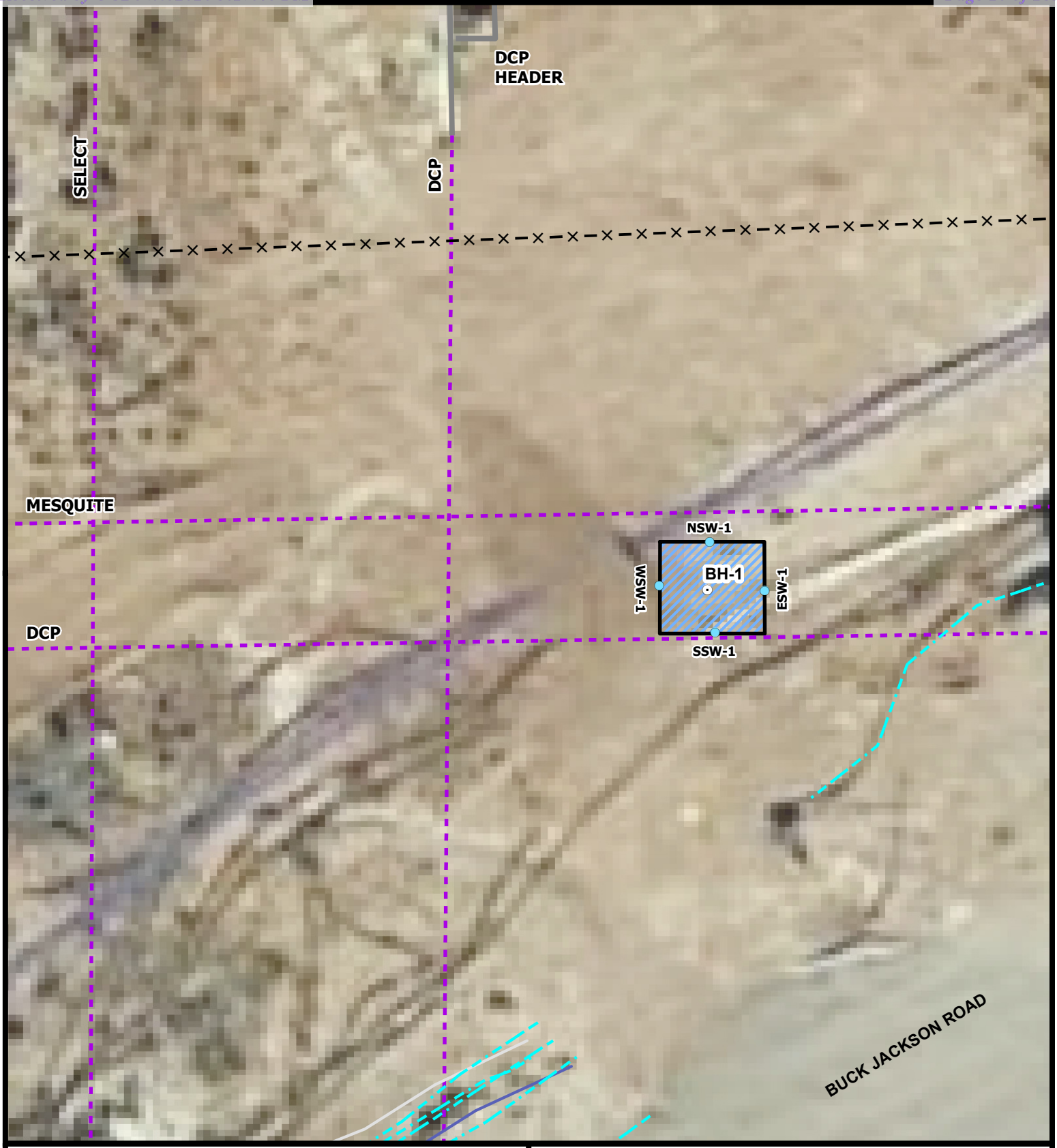
SPILL ASSESSMENT MAP
WINDWARD FEDERAL #002H
Property Located at coordinates 32.23074°,-103.72330°
LEA COUNTY, NEW MEXICO

CONCHO

Project #:
212C-MD-01961
Date: 07-06-2020

FIGURE
3

Date: 7/6/2020 Document Path: H:\GIS\CONCHO RESOURCES - COG\212C-MD-01961 WINDWARD FEDERAL #002H\MXD\212C-MD-01961 WINDWARD FEDERAL #002H FIG. 3.mxd



BH BOTTOMHOLE
BH-1 (10' x10')
SIDEWALL SAMPLE LOCATIONS
POWERPOLE
FENCE
FLOWLINES
BURIED PIPELINE
EQUIPMENT
2.0' HYDROVAC EXCAVATION DEPTH AREA

N
W E
S
0 7.5 15
Approximate Scale in Feet

Source: "New Mexico". 32°13'50.66"N, 103°43'23.88"W. **Google Earth**. November 2017. December 16, 2019

EXCAVATION AREA & DEPTH MAP
WINDWARD FEDERAL #002H
Property Located at coordinates 32.23074°,-103.72330°
LEA COUNTY, NEW MEXICO

CONCHO

Project #:
212C-MD-01961
Date: 07-08-2020

FIGURE
4

Date: 7/8/2020 Document Path: H:\GIS\CONCHO RESOURCES - COG\212C-MD-01961 WINDWARD FEDERAL #002H\MXD\212C-MD-01961 WINDWARD FEDERAL #002H FIG. 4.mxd

Tables

Table 1
COG
Windward Federal #2 (7.10.19)
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Excavation Depth (ft)	Soil Status		TPH (mg/kg)					Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	GRO+DRO	MRO	Total						
AH-1	10/15/19	0-1	-	X		<49.8	<49.8	<49.8	<49.8	<49.8	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	207
	"	1-1.5	-	X		<49.8	<49.8	<49.8	<49.8	<49.8	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	**1,170**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	**3,640**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	**4,050**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	**2,890**
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	-	-	**2,200**
	"	6-6.5	-	X		-	-	-	-	-	-	-	-	-	-	**1,550**
AH-1	12/5/2019	0-1	-	X	-	-	-	-	-	-	-	-	-	-	-	8.21
	"	1-1.5	-	X	-	-	-	-	-	-	-	-	-	-	-	5.62
	"	2-2.5	-	X	-	-	-	-	-	-	-	-	-	-	-	7.24
	"	3-3.5	-	X	-	-	-	-	-	-	-	-	-	-	-	9.21
	"	4-4.5	-	X	-	-	-	-	-	-	-	-	-	-	-	8.22
	"	5-5.5	-	X	-	-	-	-	-	-	-	-	-	-	-	18.7
	"	6-6.5	-	X	-	-	-	-	-	-	-	-	-	-	-	46.1
AH-2	10/15/19	0-1	-	X		<49.8	<49.8	<49.8	<49.8	<49.8	<0.000984	<0.000984	<0.000984	<0.000984	<0.000984	16.3
	"	1-1.5	-	X		<49.8	<49.8	<49.8	<49.8	<49.8	<0.000988	<0.000988	<0.000988	<0.000988	<0.000988	35.0
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	27.0
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	**1,300**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	**2,000**
AH-2	12/5/2019	0-1	-	X		-	-	-	-	-	-	-	-	-	-	166
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	-	-	20.4
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	7.27
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	51.7
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	165
AH-3	10/15/19	0-1	-		X	<49.6	<49.6	<49.6	<49.6	<49.6	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	**3,100**
	"	1-1.5	-		X	<49.7	<49.7	<49.7	<49.7	<49.7	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	28.8
	"	2-2.5	-		X	-	-	-	-	-	-	-	-	-	-	<9.88
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	20.3
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	11.4
AH-3	12/5/2019	0-1	-		X	-	-	-	-	-	-	-	-	-	-	**1,030**
	"	1-1.5	-		X	-	-	-	-	-	-	-	-	-	-	**628**
	"	2-2.5	-		X	-	-	-	-	-	-	-	-	-	-	19.8
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	13.1
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	29.3
AH-3	2/11/2020	0-1	-		X	-	-	-	-	-	-	-	-	-	-	**1,500**
	"	1-1.5	-		X	-	-	-	-	-	-	-	-	-	-	304
	"	2-2.5	-		X	-	-	-	-	-	-	-	-	-	-	144
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	192
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	80

Table 1
COG
Windward Federal #2 (7.10.19)
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Excavation Depth (ft)	Soil Status		TPH (mg/kg)					Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	GRO+DRO	MRO	Total						
AH-4	10/15/19	0-1	-	X		<49.8	<49.8	<49.8	<49.8	<49.8	<0.000988	<0.000988	<0.000988	<0.000988	<0.000988	**3,830**
	"	1-1.5	-	X		<49.8	<49.8	<49.8	<49.8	<49.8	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	306
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	42.6
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	**604**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	295
AH-4	12/5/2019	0-1	-	X		-	-	-	-	-	-	-	-	-	-	**757**
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	-	-	**1,650**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	**2,370**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	**1,770**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	**4,410**
AH-4	2/11/2020	0-1	-	X		-	-	-	-	-	-	-	-	-	-	**944**
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	-	-	**2,320**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	**3,440**
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	**3,680**
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	**5,200**
AH-4	4/9/2020	0-1	-	X		-	-	-	-	-	-	-	-	-	-	<5.02
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	-	-	<4.96
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	<4.99
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	-	23.6
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	-	10.3
AH-5	10/15/19	0-1	-	X		<50.0	<50.0	<50.0	<50.0	<50.0	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<9.94
	"	1-1.5	-	X		<50.0	<50.0	<50.0	<50.0	<50.0	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<9.88
AH-6	10/15/19	0-1	-	X		<50.3	<59.7	<59.7	<50.3	<59.7	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	**6,160**
	"	1-1.5	-	X		<50.0	<50.0	<50.0	<50.0	<50.0	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	**2,060**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	**9,090**
AH-6	12/5/2019	0-1	-	X		-	-	-	-	-	-	-	-	-	-	**4,500**
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	-	-	**4,650**
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	**5,420**
AH-6	2/11/2020	0-1	-	X		-	-	-	-	-	-	-	-	-	-	80.0
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	-	-	32.0
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	16.0
AH-7	10/15/19	0-1	-	X		<49.8	<49.8	<49.8	<49.8	<49.8	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	29.0
	"	1-1.5	-	X		<50.2	<50.2	<50.2	<50.2	<50.2	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	10.1
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	-	11.6

(-) Not Analyzed

Excavated

Table 1
Concho
Windward Federal #2 (7.10.19)
Lea County, New Mexico

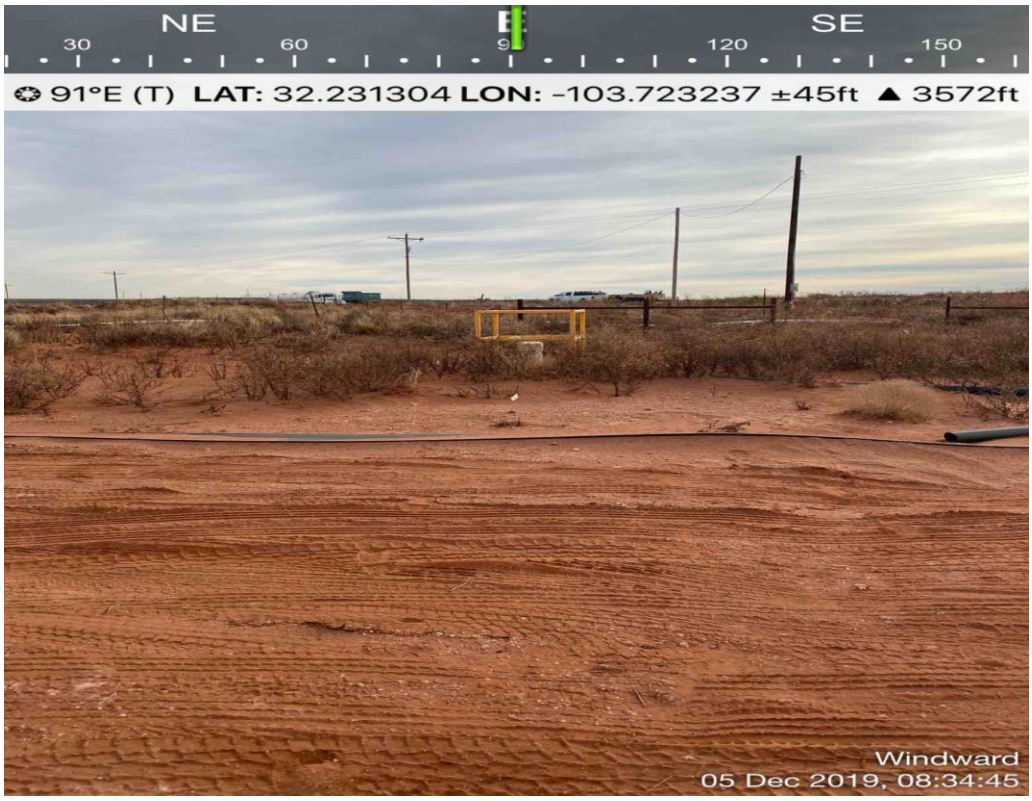
Sample ID	Sample Date	Sample Depth	Excavation Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	MRO	Total						
Bottomhole-1	6/25/2020	-	2.0'	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	66.8
NSW-1	6/25/2020	-	2.0'	X	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	70.4
WSW-1	6/25/2020	-	2.0'	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	66.2
ESW-1	6/25/2020	-	2.0'	X	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	56.4
SSW-1	6/25/2020	-	2.0'	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	64.7

(-) Not Analyzed

Photos

Concho Windward Federal #002H

Lea County, New Mexico



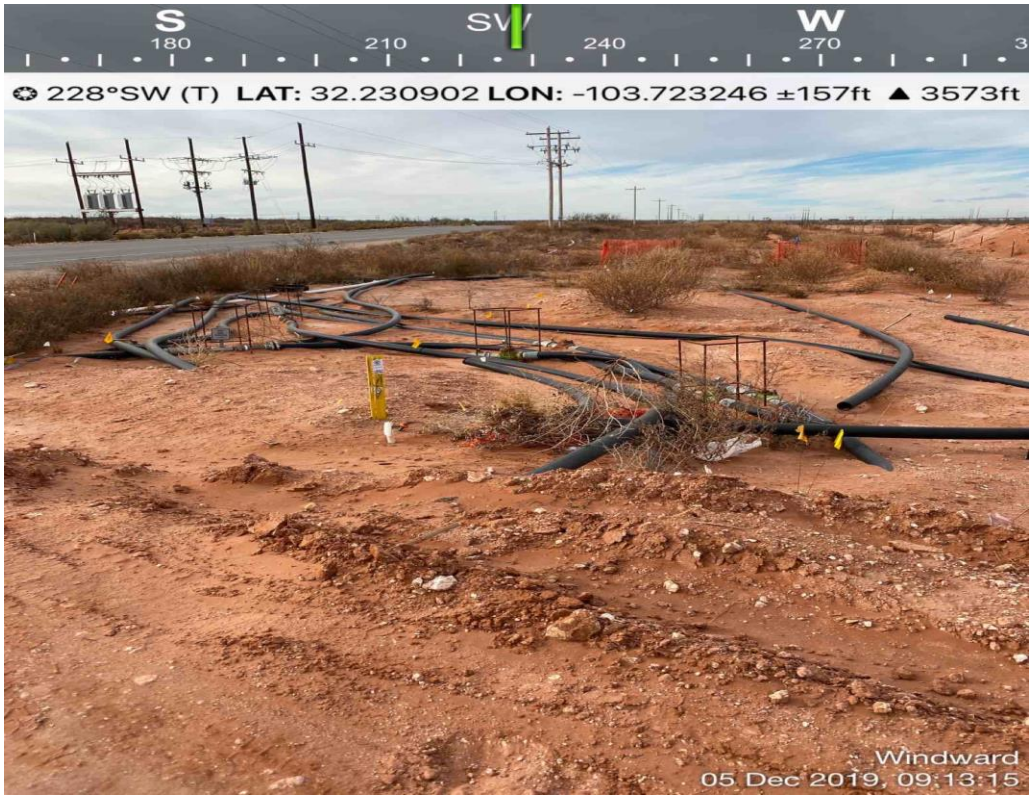
View East area of AH-1

View North area of AH-2

Concho Windward Federal #002H

Lea County, New Mexico

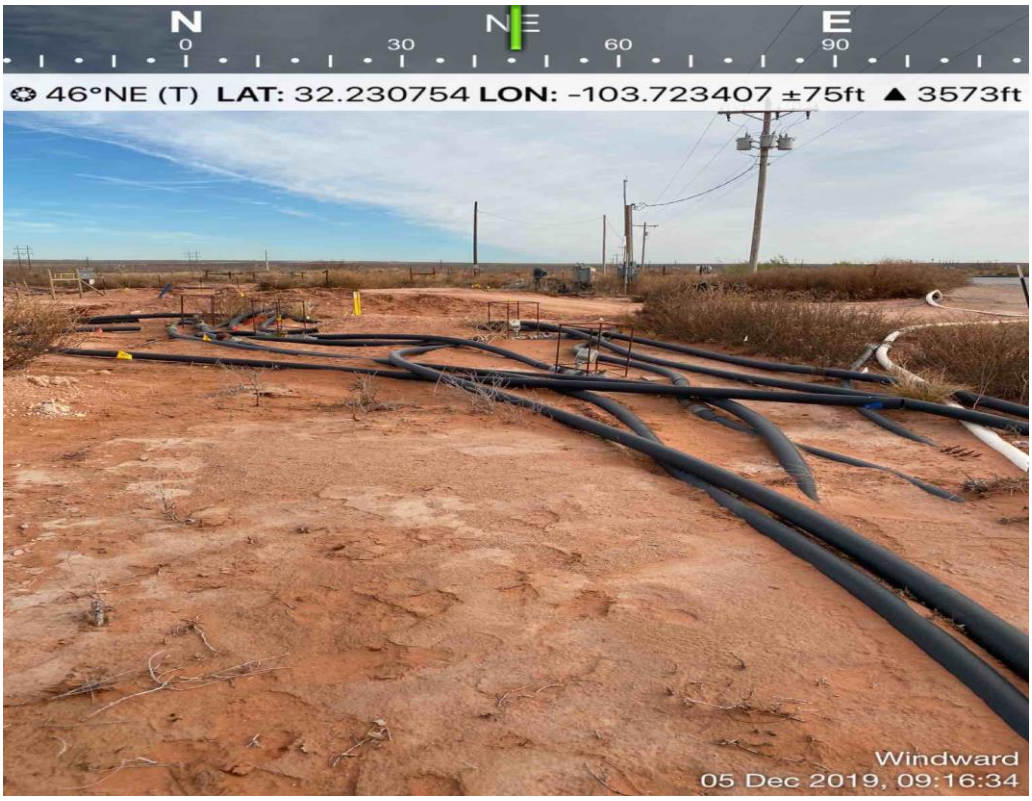
View West area of AH-3



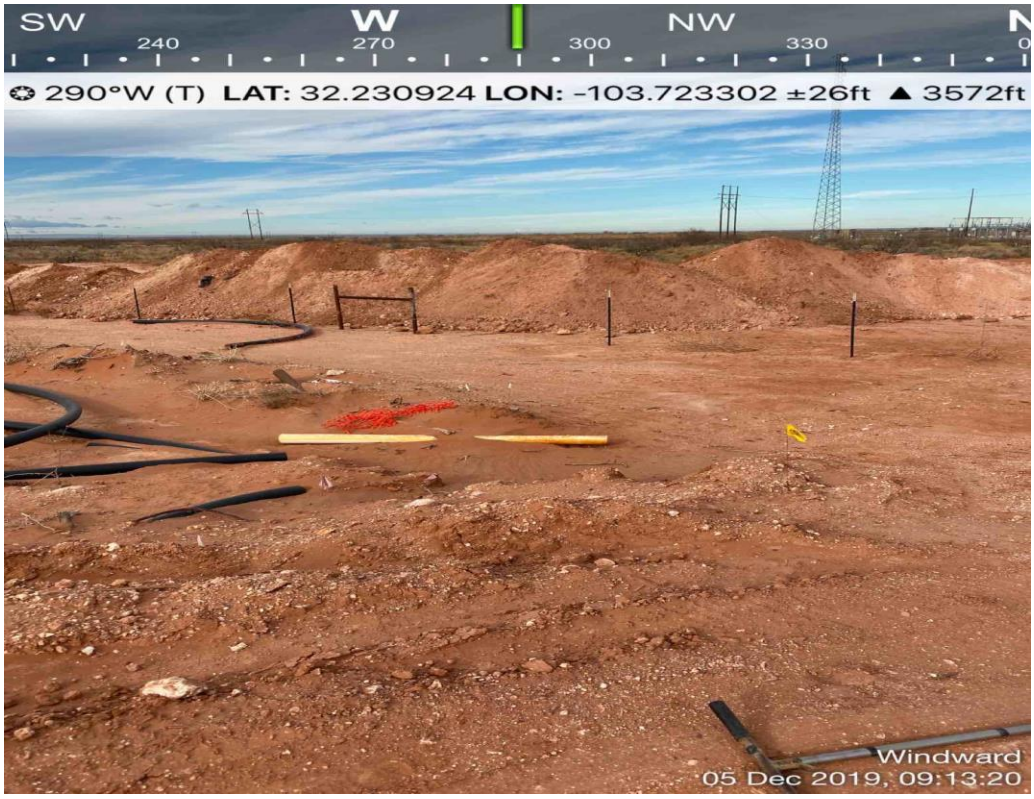
View Southwest area of AH-4

Concho Windward Federal #002H

Lea County, New Mexico



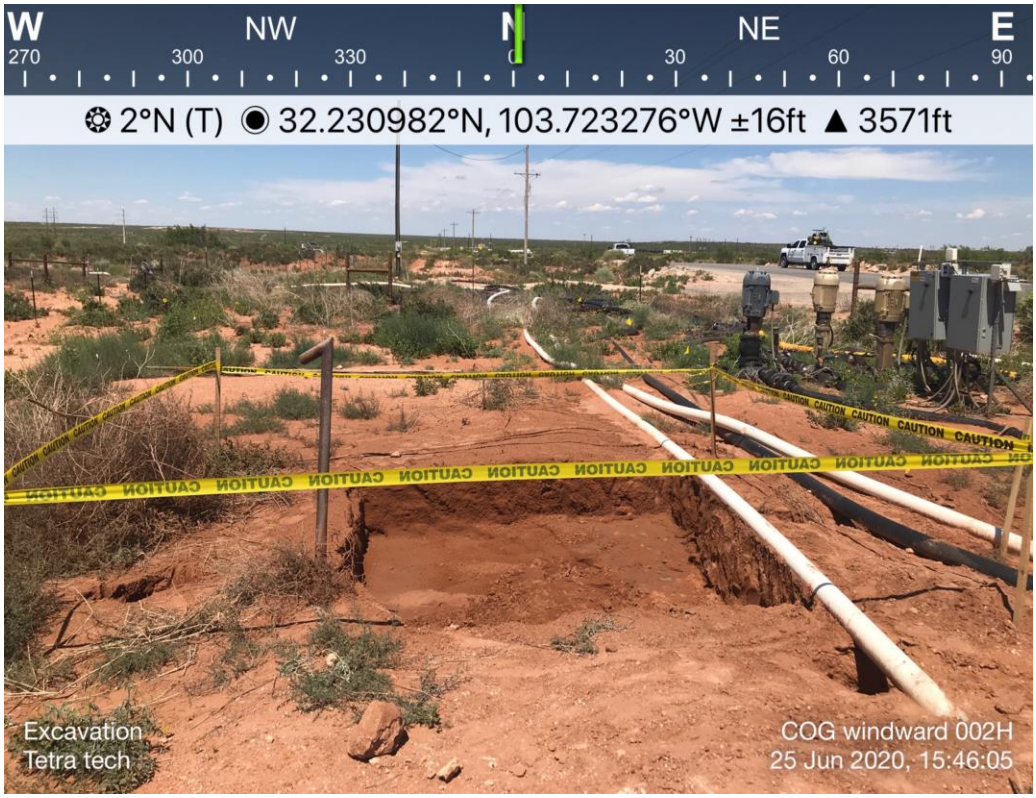
View Northeast area of AH-5



View Northwest area of AH-6 and AH-7

Concho Windward Federal #002H

Lea County, New Mexico



View North area of Bottomhole-1

Appendix A

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)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ 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? ☐ Yes ☐ 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

- ☐ The source of the release has been stopped.
- ☐ The impacted area has been secured to protect human health and the environment.
- ☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not 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: DeAnn Grant _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: _____ Date: 7-9-2020

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

****** LIQUID SPILLS - VOLUME CALCULATIONS ******

Location of spill: Windward Federal #002H **Date of Spill:** 10-Jul-2019

If the leak/spill is associated with production equipment, i.e. - wellhead, stuffing box, flowline, tank battery, production vessel, transfer pump, or storage tank **place an "X" here:** X

Input Data:

	OIL:	WATER:
If spill volumes from measurement, i.e. metering, tank volumes, etc. are known enter the volumes here:	0.0 BBL	0.0 BBL

If "known" spill volumes are given, input data for the following "Area Calculations" is optional. The above will override the calculated volumes.

Total Area Calculations

Total Surface Area	width		length		wet soil depth	oil (%)
Rectangle Area #1	34 ft		95 ft	X	1.25 in	0%
Rectangle Area #2	16 ft	X	36 ft	X	1.50 in	0%
Rectangle Area #3	32 ft	X	39 ft	X	1.50 in	0%
Rectangle Area #4	55 ft	X	90 ft	X	1.50 in	0%
Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%

Standing Liquid Calculations

Standing Liquid Area	width		length		liquid depth	oil (%)
Rectangle Area #1	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #2	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #3	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%

okay

production system leak - DAILY PRODUCTION DATA REQUIRED

Average Daily Production: Oil 0 BBL Water 0 BBL 0 Gas (MCFD)

Total Hydrocarbon Content in gas: 0% (percentage)

Did leak occur before the separator?: YES N/A *(place an "X")*

H2S Content in Produced Gas: 0 PPM

H2S Content in Tank Vapors: 0 PPM

Amount of Free Liquid Recovered: 0 BBL okay

Percentage of Oil in Free Liquid Recovered: 0% (percentage)

Liquid holding factor *: 0.14 gal per gal

Use the following when the spill wets the grains of the soil.
* Sand = **0.08** gallon (gal.) liquid per gal. volume of soil.
* Gravelly (caliche) loam = **0.14** gal. liquid per gal. volume of soil.
* Sandy clay loam soil = **0.14** gal liquid per gal. volume of soil.
* Clay loam = **0.16** gal. liquid per gal. volume of soil.

Use the following when the liquid completely fills the pore space of the soil:
Occurs when the spill soaked soil is contained by barriers, natural (or not).
* Clay loam = **0.20** gal. liquid per gal. volume of soil.
* Gravelly (caliche) loam = **0.25** gal. liquid per gal. volume of soil.
* Sandy loam = **0.5** gal. liquid per gal. volume of soil.

Total Solid/Liquid Volume: **10,004 sq. ft.** **1,183 cu. ft.** **cu. ft.**

Total Free Liquid Volume: **sq. ft.** **cu. ft.** **cu. ft.**

Estimated Volumes Spilled

	H2O	OIL
Liquid in Soil:	29.5 BBL	0.0 BBL
Free Liquid:	0.0 BBL	0.0 BBL
Totals:	**29.5 BBL**	**0.0 BBL**
Total Liquid Spill Liquid:	**29.5 BBL**	**0.00 BBL**

Estimated Production Volumes Lost

	H2O	OIL
Estimated Production Spilled:	**0.0** BBL	**0.0** BBL

Estimated Surface Damage

Surface Area: 10,004 sq. ft.

Surface Area: .2297 acre

Recovered Volumes

Estimated oil recovered: **BBL** check - okay

Estimated water recovered: **BBL** check - okay

Estimated Weights, and Volumes

Saturated Soil = 132,519 lbs 1,183 cu. ft. 44 cu. yds.

Total Liquid = 30 BBL 1,239 gallon 10,309 lbs

Air Emission from flowline leaks:

Volume of oil spill:	-	BBL
Separator gas calculated:	-	MCF
Separator gas released:	-	MCF
Gas released from oil:	-	lb
H2S released:	-	lb
Total HC gas released:	-	lb
Total HC gas released:	-	MCF

Air Emission of Reporting Requirements:

	New Mexico	Texas
HC gas release reportable?	NO	NO
H2S release reportable?	NO	NO

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
Windward Federal #2H
Lea County, New Mexico

23 South 30 East

6 110	5	4	3	2 250	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34 440	35	36

23 South 31 East

6 85	5 354	4 168	3	2	1
7 140	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26 430	25
31	32	33	34	35	36

23 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 400 478	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 30 East

6	5	4	3	2	1
7	8 186	9	10	11	12
18	17	16	15	14	13
19 231 150	20	21	22	23 400	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 31 East

6	5	4	3	2 160	1
7	8	9	10	11	12 Site
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 32 East

6	5	4	3 454	2	1
7	8	9	10 34	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33 290	34	35	36

25 South 30 East

6	5	4	3	2 295	1
7 264	8	9 295	10	11	12 390
18	17	16	15	14	13
19	20	21 265 268	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 390 290	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32 290	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

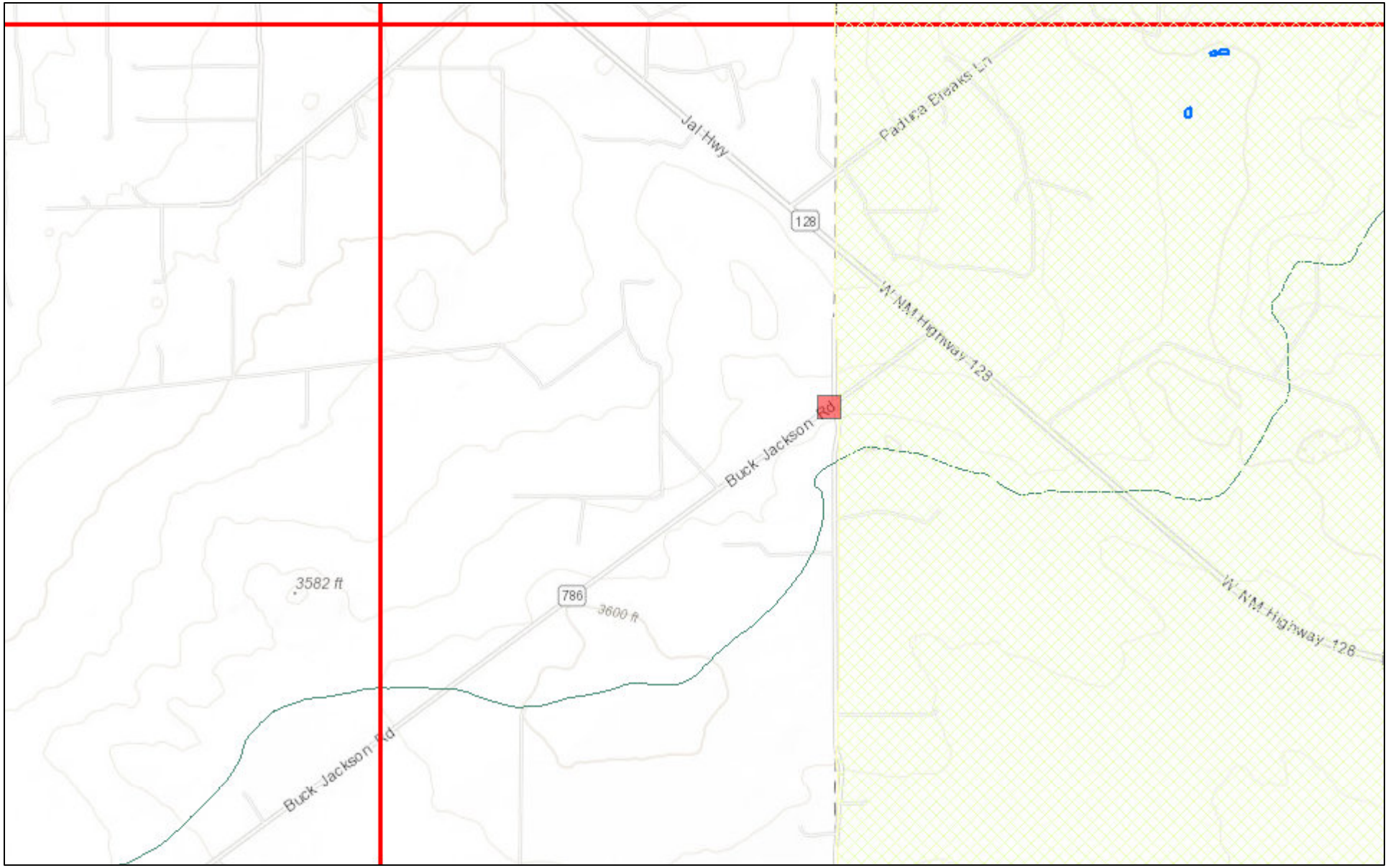
143 NMOCD Groundwater map well location

USGS science for a changing world

National Water Information System: Mapper

Site Information

New Mexico NFHL Data



July 7, 2020

1:36,112

0 0.3 0.6 1.2 mi

0 0.5 1 2 km

FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

Search Results -- 1 sites found

genc code usgs
site no list
- 321312103395601

Minimum number of levels 1
Save file of selected sites to local disk for future upload

US S 21 1210 5601 24S 2 10 44

Lea County, New Mexico
Latitude 32 13 30.4 , Longitude 103 39 52.7 NAD83
Land surface elevation 3,589.00 feet above NGVD29
The depth of the well is 60 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

1955-06-03		D	31.90		2	R	U		U		A
1981-03-20		D	19.93		2		U		U		A
1991-05-29		D	39.64		2		U		U		A
2001-02-27		D	36.58		2		S		U		A
2010-12-16	15:30 MST	m	33.96		2		S	USGS	S		A

Water-level date-time accuracy	m	Date is accurate to the Minute
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Measuring agency		Not determined
Source of measurement	S	Measured by personnel of reporting agency.

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

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y		Depth Well	Depth Water	Water Column
C 02258		C	ED		3	2	26	23S	31E	618055	3571853*		662		
C 02348		C	ED	1	4	3	26	23S	31E	617648	3571068		700	430	270
C 02492		CUB	ED	4	4	4	06	23S	31E	612056	3577320*		135	85	50
C 02492 POD2		C	ED	3	2	2	07	23S	31E	611767	3576996		400	125	275
C 02664		CUB	ED	3	3	2	05	23S	31E	613049	3578138*		4291	354	3937
C 02725		CUB	ED	1	1	1	05	23S	31E	612240	3578731*		532		
C 02773		CUB	ED	4	1	3	03	23S	31E	615668	3577762*		880		
C 02774		CUB	ED	3	1	3	04	23S	31E	613857	3577745*		1660		
C 02775		CUB	ED	1	1	1	05	23S	31E	612240	3578731*		529		
C 02776		CUB	ED	2	1	1	05	23S	31E	612440	3578731*		661		
C 02777		CUB	ED	4	4	4	10	23S	31E	616974	3575662		890		
C 02865		CUB	ED	4	4	4	06	23S	31E	612056	3577320*		174		
C 02954 E PL		CUB	ED	3	1	4	20	23S	31E	613114	3572906*		905		
C 03140		CUB	ED	4	2	4	04	23S	31E	615266	3577758*		684		
C 03351		C	ED	4	1	4	04	23S	31E	614917	3577861		320	168	152
C 03520 POD1		C	ED	3	1	1	07	23S	31E	610733	3576905		500		
C 03749 POD1		CUB	ED		2	2	15	23S	31E	616974	3575662		865	639	226

Average Depth to Water: **00 feet**

Minimum Depth: **85 feet**

Maximum Depth: **6 feet**

Record Count: 17

PLSS Search:

Township: 23S **Range:** 31E

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y		DepthWell	DepthWater	Water Column
C 02405		CUB	ED		4	1	02	24S	31E	617690	3568631*		275	160	115
C 02440		C	ED		2	3	10	24S	31E	616103	3566599*		350		
C 02460		C	ED			3	02	24S	31E	617496	3568022*		320		
C 02460 POD2		C	ED			3	02	24S	31E	617496	3568022*		320		
C 02464		C	ED	3	4	1	02	24S	31E	617589	3568530*		320	205	115
C 02661		CUB	ED	3	3	1	04	24S	31E	613969	3568485*		708		
C 02783		CUB	ED	3	3	1	04	24S	31E	613911	3568461		708		
C 02783 POD2		CUB	ED	3	3	1	04	24S	31E	613911	3568461		672		
C 02784		C	ED	4	2	4	04	24S	31E	613911	3568461		584		
C 02785		CUB	ED	3	3	1	04	24S	31E	613969	3568485*		692		

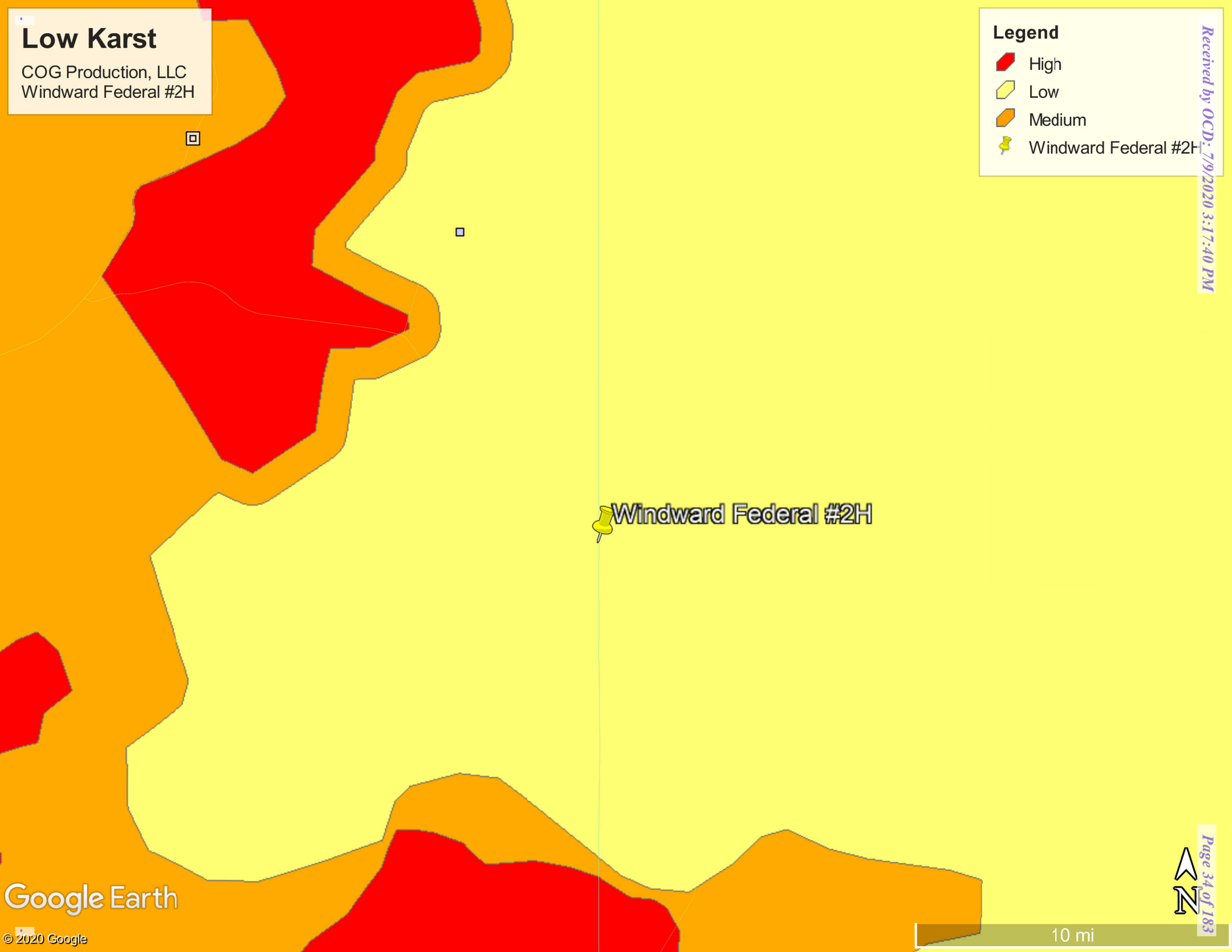
Average Depth to Water: **182 feet**
Minimum Depth: **160 feet**
Maximum Depth: **205 feet**

Record Count: 10

PLSS Search:

Township: 24S **Range:** 31E

***UTM location was derived from PLSS - see Help**



Appendix C

Certificate of Analysis Summary 640055

Tetra Tech- Midland, Midland, TX

Project Name: Windward Fed 2H (710,19)

Project Id: 212C-MD-01961
Contact: Ike Tavarez
Project Location: Lea Co, NM

Date Received in Lab: Tue Oct-15-19 03:29 pm
Report Date: 18-OCT-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	640055-001		640055-002		640055-003		640055-004		640055-005		640055-006	
	Field Id:	AH#1 (0-1')		AH#1 (1-1.5')		AH#1 (2-2.5')		AH#1 (3-3.5')		AH#1 (4-4.5')		AH#1 (5-5.5')	
	Depth:	0-1 ft		1-1.5 ft		2-2.5 ft		3-3.5 ft		4-4.5 ft		5-5.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00	
BTEX by EPA 8021B	***Extracted:***	Oct-15-19 16:10		Oct-15-19 16:10									
	Analyzed:	Oct-15-19 23:54		Oct-16-19 00:14									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Benzene		<0.000996	0.000996	<0.000996	0.000996								
Toluene		<0.000996	0.000996	<0.000996	0.000996								
Ethylbenzene		<0.000996	0.000996	<0.000996	0.000996								
m,p-Xylenes		<0.00199	0.00199	<0.00199	0.00199								
o-Xylene		<0.000996	0.000996	<0.000996	0.000996								
Total Xylenes		<0.000996	0.000996	<0.000996	0.000996								
Total BTEX		<0.000996	0.000996	<0.000996	0.000996								
Chloride by EPA 300	***Extracted:***	Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10	
	Analyzed:	Oct-16-19 17:21		Oct-16-19 17:27		Oct-16-19 17:33		Oct-16-19 17:40		Oct-16-19 17:46		Oct-16-19 18:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		207	9.94	1170	49.9	3640 D	198	4050 D	198	2890 D	199	2200 D	200
TPH By SW8015 Mod	***Extracted:***	Oct-15-19 15:30		Oct-15-19 15:30									
	Analyzed:	Oct-16-19 02:38		Oct-16-19 02:58									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<49.8	49.8								
Diesel Range Organics (DRO)		<49.8	49.8	<49.8	49.8								
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<49.8	49.8								
Total TPH		<49.8	49.8	<49.8	49.8								

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 640055

Tetra Tech- Midland, Midland, TX

Project Name: Windward Fed 2H (710,19)

Project Id: 212C-MD-01961
Contact: Ike Tavarez
Project Location: Lea Co, NM

Date Received in Lab: Tue Oct-15-19 03:29 pm
Report Date: 18-OCT-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	640055-007		640055-008		640055-009		640055-010		640055-011		640055-012	
	Field Id:	AH#1 (6-6.5')		AH#2 (0-1')		AH#2 (1-1.5')		AH#2 (2-2.5')		AH#2 (3-3.5')		AH#2 (4-4.5')	
	Depth:	6-6.5 ft		0-1 ft		1-1.5 ft		2-2.5 ft		3-3.5 ft		4-4.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00	
BTEX by EPA 8021B	*Extracted:*			Oct-15-19 16:10		Oct-15-19 16:10							
	Analyzed:			Oct-16-19 01:29		Oct-16-19 01:50							
	Units/RL:			mg/kg	RL	mg/kg	RL						
Benzene				<0.000984	0.000984	<0.000988	0.000988						
Toluene				<0.000984	0.000984	<0.000988	0.000988						
Ethylbenzene				<0.000984	0.000984	<0.000988	0.000988						
m,p-Xylenes				<0.00197	0.00197	<0.00198	0.00198						
o-Xylene				<0.000984	0.000984	<0.000988	0.000988						
Total Xylenes				<0.000984	0.000984	<0.000988	0.000988						
Total BTEX				<0.000984	0.000984	<0.000988	0.000988						
Chloride by EPA 300	*Extracted:*	Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10	
	Analyzed:	Oct-16-19 18:13		Oct-16-19 18:20		Oct-16-19 18:27		Oct-16-19 18:33		Oct-16-19 18:54		Oct-16-19 19:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1550 D	98.6	16.3	9.92	35.0	9.84	27.0	9.90	1300	100	2000	99.6
TPH By SW8015 Mod	*Extracted:*			Oct-15-19 15:30		Oct-15-19 17:00							
	Analyzed:			Oct-16-19 03:18		Oct-15-19 21:02							
	Units/RL:			mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)				<49.8	49.8	<49.8	49.8						
Diesel Range Organics (DRO)				<49.8	49.8	<49.8	49.8						
Motor Oil Range Hydrocarbons (MRO)				<49.8	49.8	<49.8	49.8						
Total TPH				<49.8	49.8	<49.8	49.8						

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 640055

Tetra Tech- Midland, Midland, TX

Project Name: Windward Fed 2H (710,19)

Project Id: 212C-MD-01961
Contact: Ike Tavarez
Project Location: Lea Co, NM

Date Received in Lab: Tue Oct-15-19 03:29 pm
Report Date: 18-OCT-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	640055-013		640055-014		640055-015		640055-016		640055-017		640055-018	
	Field Id:	AH#3 (0-1')		AH#3 (1-1.5')		AH#3 (2-2.5')		AH#3 (3-3.5')		AH#3 (4-4.5')		AH#4 (0-1')	
	Depth:	0-1 ft		1-1.5 ft		2-2.5 ft		3-3.5 ft		4-4.5 ft		0-1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00	
BTEX by EPA 8021B	***Extracted:***	Oct-15-19 16:10		Oct-15-19 16:10								Oct-15-19 16:10	
	Analyzed:	Oct-16-19 02:10		Oct-16-19 02:30								Oct-16-19 02:51	
	Units/RL:	mg/kg	RL	mg/kg	RL							mg/kg	RL
Benzene		<0.000998	0.000998	<0.000992	0.000992							<0.000988	0.000988
Toluene		<0.000998	0.000998	<0.000992	0.000992							<0.000988	0.000988
Ethylbenzene		<0.000998	0.000998	<0.000992	0.000992							<0.000988	0.000988
m,p-Xylenes		<0.00200	0.00200	<0.00198	0.00198							<0.00198	0.00198
o-Xylene		<0.000998	0.000998	<0.000992	0.000992							<0.000988	0.000988
Total Xylenes		<0.000998	0.000998	<0.000992	0.000992							<0.000988	0.000988
Total BTEX		<0.000998	0.000998	<0.000992	0.000992							<0.000988	0.000988
Chloride by EPA 300	***Extracted:***	Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10		Oct-15-19 16:10	
	Analyzed:	Oct-16-19 19:07		Oct-16-19 19:27		Oct-16-19 19:34		Oct-16-19 19:41		Oct-16-19 19:47		Oct-16-19 19:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3100	101	28.8	9.96	<9.88	9.88	20.3	9.94	11.4	9.88	3830 D	197
TPH By SW8015 Mod	***Extracted:***	Oct-15-19 17:00		Oct-15-19 17:00								Oct-15-19 17:00	
	Analyzed:	Oct-15-19 21:22		Oct-15-19 21:42								Oct-15-19 22:01	
	Units/RL:	mg/kg	RL	mg/kg	RL							mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.6	49.6	<49.7	49.7							<49.8	49.8
Diesel Range Organics (DRO)		<49.6	49.6	<49.7	49.7							<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<49.6	49.6	<49.7	49.7							<49.8	49.8
Total TPH		<49.6	49.6	<49.7	49.7							<49.8	49.8

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 640055

Tetra Tech- Midland, Midland, TX

Project Name: Windward Fed 2H (710,19)

Project Id: 212C-MD-01961
Contact: Ike Tavarez
Project Location: Lea Co, NM

Date Received in Lab: Tue Oct-15-19 03:29 pm
Report Date: 18-OCT-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	640055-019		640055-020		640055-021		640055-022		640055-023		640055-024	
	Field Id:	AH#4 (1-1.5')		AH#4 (2-2.5')		AH#4 (3-3.5')		AH#4 (4-4.5')		AH#5 (0-1')		AH#5 (1-1.5')	
	Depth:	1-1.5 ft		2-2.5 ft		3-3.5 ft		4-4.5 ft		0-1 ft		1-1.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00	
BTEX by EPA 8021B	***Extracted:***	Oct-15-19 18:10								Oct-15-19 18:10		Oct-15-19 18:10	
	Analyzed:	Oct-16-19 11:15								Oct-16-19 11:35		Oct-16-19 11:56	
	Units/RL:	mg/kg	RL							mg/kg	RL	mg/kg	RL
Benzene		<0.000998	0.000998							<0.00101	0.00101	<0.000992	0.000992
Toluene		<0.000998	0.000998							<0.00101	0.00101	<0.000992	0.000992
Ethylbenzene		<0.000998	0.000998							<0.00101	0.00101	<0.000992	0.000992
m,p-Xylenes		<0.00200	0.00200							<0.00202	0.00202	<0.00198	0.00198
o-Xylene		<0.000998	0.000998							<0.00101	0.00101	<0.000992	0.000992
Total Xylenes		<0.000998	0.000998							<0.00101	0.00101	<0.000992	0.000992
Total BTEX		<0.000998	0.000998							<0.00101	0.00101	<0.000992	0.000992
Chloride by EPA 300	***Extracted:***	Oct-15-19 17:10		Oct-15-19 17:10		Oct-15-19 17:10		Oct-15-19 17:10		Oct-15-19 17:10		Oct-15-19 17:10	
	Analyzed:	Oct-16-19 12:08		Oct-16-19 12:28		Oct-16-19 12:35		Oct-16-19 12:42		Oct-16-19 12:49		Oct-16-19 12:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		306	49.4	42.6	10.0	604	49.3	295	50.2	<9.94	9.94	<9.88	9.88
TPH By SW8015 Mod	***Extracted:***	Oct-15-19 17:00								Oct-15-19 17:00		Oct-15-19 17:00	
	Analyzed:	Oct-15-19 22:21								Oct-15-19 22:41		Oct-15-19 23:01	
	Units/RL:	mg/kg	RL							mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8							<50.0	50.0	<49.8	49.8
Diesel Range Organics (DRO)		<49.8	49.8							<50.0	50.0	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8							<50.0	50.0	<49.8	49.8
Total TPH		<49.8	49.8							<50.0	50.0	<49.8	49.8

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 640055

Tetra Tech- Midland, Midland, TX

Project Name: Windward Fed 2H (710,19)

Project Id: 212C-MD-01961
Contact: Ike Tavarez
Project Location: Lea Co, NM

Date Received in Lab: Tue Oct-15-19 03:29 pm
Report Date: 18-OCT-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	640055-025		640055-026		640055-027		640055-028		640055-029		640055-030	
	Field Id:	AH#6 (0-1')		AH#6 (1-1.5')		AH#6 (2-2.5')		AH#7 (0-1')		AH#7 (1-1.5')		AH#7 (2-2.5')	
	Depth:	0-1 ft		1-1.5 ft		2-2.5 ft		0-1 ft		1-1.5 ft		2-2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00		Oct-15-19 00:00	
BTEX by EPA 8021B	***Extracted:***	Oct-15-19 18:10		Oct-15-19 18:10				Oct-15-19 18:10		Oct-15-19 18:10			
	Analyzed:	Oct-16-19 12:16		Oct-16-19 12:36				Oct-16-19 12:57		Oct-16-19 13:17			
	Units/RL:	mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL		
Benzene		<0.00101	0.00101	<0.00101	0.00101			<0.00100	0.00100	<0.000994	0.000994		
Toluene		<0.00101	0.00101	<0.00101	0.00101			<0.00100	0.00100	<0.000994	0.000994		
Ethylbenzene		<0.00101	0.00101	<0.00101	0.00101			<0.00100	0.00100	<0.000994	0.000994		
m,p-Xylenes		<0.00202	0.00202	<0.00202	0.00202			<0.00200	0.00200	<0.00199	0.00199		
o-Xylene		<0.00101	0.00101	<0.00101	0.00101			<0.00100	0.00100	<0.000994	0.000994		
Total Xylenes		<0.00101	0.00101	<0.00101	0.00101			<0.00100	0.00100	<0.000994	0.000994		
Total BTEX		<0.00101	0.00101	<0.00101	0.00101			<0.00100	0.00100	<0.000994	0.000994		
Chloride by EPA 300	***Extracted:***	Oct-15-19 17:10		Oct-15-19 17:10		Oct-15-19 17:10		Oct-15-19 17:10		Oct-15-19 17:10		Oct-15-19 17:10	
	Analyzed:	Oct-16-19 13:02		Oct-16-19 13:09		Oct-16-19 13:29		Oct-16-19 13:36		Oct-16-19 13:43		Oct-16-19 13:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6160	497	2060	99.6	9090	497	29.0	9.82	10.1	9.82	11.6	9.86
TPH By SW8015 Mod	***Extracted:***	Oct-15-19 17:00		Oct-16-19 11:10				Oct-15-19 17:00		Oct-15-19 17:00			
	Analyzed:	Oct-15-19 23:21		Oct-17-19 12:36				Oct-16-19 00:20		Oct-15-19 20:02			
	Units/RL:	mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.0	50.0			<49.8	49.8	<50.2	50.2		
Diesel Range Organics (DRO)		59.7	50.3	<50.0	50.0			<49.8	49.8	<50.2	50.2		
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.0	50.0			<49.8	49.8	<50.2	50.2		
Total TPH		59.7	50.3	<50.0	50.0			<49.8	49.8	<50.2	50.2		

Version: 1.%

Jessica Kramer
Project Assistant

Analytical Report 640055

for

Tetra Tech- Midland

Project Manager: Ike Tavarez

Windward Fed 2H (710,19)

212C-MD-01961

18-OCT-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

18-OCT-19

Project Manager: **Ike Tavarez**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: XENCO Report No(s): **640055**
Windward Fed 2H (710,19)
Project Address: Lea Co, NM

Ike Tavarez:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 640055. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 640055 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH#1 (0-1')	S	10-15-19 00:00	0 - 1 ft	640055-001
AH#1 (1-1.5')	S	10-15-19 00:00	1 - 1.5 ft	640055-002
AH#1 (2-2.5')	S	10-15-19 00:00	2 - 2.5 ft	640055-003
AH#1 (3-3.5')	S	10-15-19 00:00	3 - 3.5 ft	640055-004
AH#1 (4-4.5')	S	10-15-19 00:00	4 - 4.5 ft	640055-005
AH#1 (5-5.5')	S	10-15-19 00:00	5 - 5.5 ft	640055-006
AH#1 (6-6.5')	S	10-15-19 00:00	6 - 6.5 ft	640055-007
AH#2 (0-1')	S	10-15-19 00:00	0 - 1 ft	640055-008
AH#2 (1-1.5')	S	10-15-19 00:00	1 - 1.5 ft	640055-009
AH#2 (2-2.5')	S	10-15-19 00:00	2 - 2.5 ft	640055-010
AH#2 (3-3.5')	S	10-15-19 00:00	3 - 3.5 ft	640055-011
AH#2 (4-4.5')	S	10-15-19 00:00	4 - 4.5 ft	640055-012
AH#3 (0-1')	S	10-15-19 00:00	0 - 1 ft	640055-013
AH#3 (1-1.5')	S	10-15-19 00:00	1 - 1.5 ft	640055-014
AH#3 (2-2.5')	S	10-15-19 00:00	2 - 2.5 ft	640055-015
AH#3 (3-3.5')	S	10-15-19 00:00	3 - 3.5 ft	640055-016
AH#3 (4-4.5')	S	10-15-19 00:00	4 - 4.5 ft	640055-017
AH#4 (0-1')	S	10-15-19 00:00	0 - 1 ft	640055-018
AH#4 (1-1.5')	S	10-15-19 00:00	1 - 1.5 ft	640055-019
AH#4 (2-2.5')	S	10-15-19 00:00	2 - 2.5 ft	640055-020
AH#4 (3-3.5')	S	10-15-19 00:00	3 - 3.5 ft	640055-021
AH#4 (4-4.5')	S	10-15-19 00:00	4 - 4.5 ft	640055-022
AH#5 (0-1')	S	10-15-19 00:00	0 - 1 ft	640055-023
AH#5 (1-1.5')	S	10-15-19 00:00	1 - 1.5 ft	640055-024
AH#6 (0-1')	S	10-15-19 00:00	0 - 1 ft	640055-025
AH#6 (1-1.5')	S	10-15-19 00:00	1 - 1.5 ft	640055-026
AH#6 (2-2.5')	S	10-15-19 00:00	2 - 2.5 ft	640055-027
AH#7 (0-1')	S	10-15-19 00:00	0 - 1 ft	640055-028
AH#7 (1-1.5')	S	10-15-19 00:00	1 - 1.5 ft	640055-029
AH#7 (2-2.5')	S	10-15-19 00:00	2 - 2.5 ft	640055-030

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Windward Fed 2H (710,19)

Project ID: *212C-MD-01961*
Work Order Number(s): *640055*

Report Date: *18-OCT-19*
Date Received: *10/15/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3104436 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3104511 BTEX by EPA 8021B
Lab Sample ID 640055-029 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 640055-019, -023, -024, -025, -026, -028, -029.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#1 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-001	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**207**	9.94	mg/kg	10.16.19 17.21		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 15.30	Basis:	Wet Weight
Seq Number:	3104456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.16.19 02.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.16.19 02.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.16.19 02.38	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.16.19 02.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	10.16.19 02.38	
o-Terphenyl	84-15-1	100	%	70-135	10.16.19 02.38	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#1 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-001	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	0
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Dry Weight
Seq Number:	3104436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	10.15.19 23.54	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	10.15.19 23.54	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	10.15.19 23.54	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	10.15.19 23.54	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	10.15.19 23.54	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	10.15.19 23.54	U	1
Total BTEX		<0.000996	0.000996	mg/kg	10.15.19 23.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	10.15.19 23.54	
1,4-Difluorobenzene	540-36-3	106	%	70-130	10.15.19 23.54	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#1 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-002	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1170**	49.9	mg/kg	10.16.19 17.27		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 15.30	Basis:	Wet Weight
Seq Number:	3104456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.16.19 02.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.16.19 02.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.16.19 02.58	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.16.19 02.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	10.16.19 02.58	
o-Terphenyl	84-15-1	95	%	70-135	10.16.19 02.58	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#1 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-002	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	0
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Dry Weight
Seq Number:	3104436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	10.16.19 00.14	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	10.16.19 00.14	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	10.16.19 00.14	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	10.16.19 00.14	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	10.16.19 00.14	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	10.16.19 00.14	U	1
Total BTEX		<0.000996	0.000996	mg/kg	10.16.19 00.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	10.16.19 00.14	
1,4-Difluorobenzene	540-36-3	106	%	70-130	10.16.19 00.14	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#1 (2-2.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-003	Date Collected:	10.15.19 00.00	Sample Depth:	2 - 2.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3640**	198	mg/kg	10.17.19 12.18	D	20

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#1 (3-3.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-004	Date Collected:	10.15.19 00.00	Sample Depth:	3 - 3.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4050**	198	mg/kg	10.17.19 12.24	D	20

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#1 (4-4.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-005	Date Collected:	10.15.19 00.00	Sample Depth:	4 - 4.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2890**	199	mg/kg	10.17.19 12.31	D	20

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#1 (5-5.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-006	Date Collected:	10.15.19 00.00	Sample Depth:	5 - 5.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2200**	200	mg/kg	10.17.19 12.37	D	20

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#1 (6-6.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-007	Date Collected:	10.15.19 00.00	Sample Depth:	6 - 6.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1550**	98.6	mg/kg	10.17.19 12.43	D	10

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#2 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-008	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.3**	9.92	mg/kg	10.16.19 18.20		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 15.30	Basis:	Wet Weight
Seq Number:	3104456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.16.19 03.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.16.19 03.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.16.19 03.18	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.16.19 03.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	10.16.19 03.18	
o-Terphenyl	84-15-1	94	%	70-135	10.16.19 03.18	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#2 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-008	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	0
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Dry Weight
Seq Number:	3104436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000984	0.000984	mg/kg	10.16.19 01.29	U	1
Toluene	108-88-3	<0.000984	0.000984	mg/kg	10.16.19 01.29	U	1
Ethylbenzene	100-41-4	<0.000984	0.000984	mg/kg	10.16.19 01.29	U	1
m,p-Xylenes	179601-23-1	<0.00197	0.00197	mg/kg	10.16.19 01.29	U	1
o-Xylene	95-47-6	<0.000984	0.000984	mg/kg	10.16.19 01.29	U	1
Total Xylenes	1330-20-7	<0.000984	0.000984	mg/kg	10.16.19 01.29	U	1
Total BTEX		<0.000984	0.000984	mg/kg	10.16.19 01.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	10.16.19 01.29	
1,4-Difluorobenzene	540-36-3	103	%	70-130	10.16.19 01.29	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#2 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-009	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.0**	9.84	mg/kg	10.16.19 18.27		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.15.19 21.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.15.19 21.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.15.19 21.02	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.15.19 21.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	10.15.19 21.02	
o-Terphenyl	84-15-1	111	%	70-135	10.15.19 21.02	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#2 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-009	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	0
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Dry Weight
Seq Number:	3104436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000988	0.000988	mg/kg	10.16.19 01.50	U	1
Toluene	108-88-3	<0.000988	0.000988	mg/kg	10.16.19 01.50	U	1
Ethylbenzene	100-41-4	<0.000988	0.000988	mg/kg	10.16.19 01.50	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	10.16.19 01.50	U	1
o-Xylene	95-47-6	<0.000988	0.000988	mg/kg	10.16.19 01.50	U	1
Total Xylenes	1330-20-7	<0.000988	0.000988	mg/kg	10.16.19 01.50	U	1
Total BTEX		<0.000988	0.000988	mg/kg	10.16.19 01.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	10.16.19 01.50	
4-Bromofluorobenzene	460-00-4	110	%	70-130	10.16.19 01.50	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#2 (2-2.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-010	Date Collected:	10.15.19 00.00	Sample Depth:	2 - 2.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**27.0**	9.90	mg/kg	10.16.19 18.33		1

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#2 (3-3.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-011	Date Collected:	10.15.19 00.00	Sample Depth:	3 - 3.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1300**	100	mg/kg	10.16.19 18.54		10

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#2 (4-4.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-012	Date Collected:	10.15.19 00.00	Sample Depth:	4 - 4.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2000**	99.6	mg/kg	10.16.19 19.00		10

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#3 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-013	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3100**	101	mg/kg	10.16.19 19.07		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.6	49.6	mg/kg	10.15.19 21.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.6	49.6	mg/kg	10.15.19 21.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.6	49.6	mg/kg	10.15.19 21.22	U	1
Total TPH	PHC635	<49.6	49.6	mg/kg	10.15.19 21.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	10.15.19 21.22	
o-Terphenyl	84-15-1	89	%	70-135	10.15.19 21.22	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#3 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-013	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	0
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Dry Weight
Seq Number:	3104436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	10.16.19 02.10	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	10.16.19 02.10	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	10.16.19 02.10	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	10.16.19 02.10	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	10.16.19 02.10	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	10.16.19 02.10	U	1
Total BTEX		<0.000998	0.000998	mg/kg	10.16.19 02.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	10.16.19 02.10	
4-Bromofluorobenzene	460-00-4	118	%	70-130	10.16.19 02.10	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#3 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-014	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.8**	9.96	mg/kg	10.16.19 19.27		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	10.15.19 21.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	10.15.19 21.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	10.15.19 21.42	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	10.15.19 21.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	10.15.19 21.42	
o-Terphenyl	84-15-1	103	%	70-135	10.15.19 21.42	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#3 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-014	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	0
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Dry Weight
Seq Number:	3104436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	10.16.19 02.30	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	10.16.19 02.30	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	10.16.19 02.30	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	10.16.19 02.30	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	10.16.19 02.30	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	10.16.19 02.30	U	1
Total BTEX		<0.000992	0.000992	mg/kg	10.16.19 02.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	10.16.19 02.30	
4-Bromofluorobenzene	460-00-4	113	%	70-130	10.16.19 02.30	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#3 (2-2.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-015	Date Collected:	10.15.19 00.00	Sample Depth:	2 - 2.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.88	9.88	mg/kg	10.16.19 19.34	U	1

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#3 (3-3.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-016	Date Collected:	10.15.19 00.00	Sample Depth:	3 - 3.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.3**	9.94	mg/kg	10.16.19 19.41		1

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#3 (4-4.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-017	Date Collected:	10.15.19 00.00	Sample Depth:	4 - 4.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.4**	9.88	mg/kg	10.16.19 19.47		1

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#4 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-018	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Wet Weight
Seq Number:	3104578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3830**	197	mg/kg	10.17.19 12.49	D	20

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.15.19 22.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.15.19 22.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.15.19 22.01	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.15.19 22.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	10.15.19 22.01	
o-Terphenyl	84-15-1	91	%	70-135	10.15.19 22.01	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#4 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-018	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	0
Analyst:	MAB	Date Prep:	10.15.19 16.10	Basis:	Dry Weight
Seq Number:	3104436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000988	0.000988	mg/kg	10.16.19 02.51	U	1
Toluene	108-88-3	<0.000988	0.000988	mg/kg	10.16.19 02.51	U	1
Ethylbenzene	100-41-4	<0.000988	0.000988	mg/kg	10.16.19 02.51	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	10.16.19 02.51	U	1
o-Xylene	95-47-6	<0.000988	0.000988	mg/kg	10.16.19 02.51	U	1
Total Xylenes	1330-20-7	<0.000988	0.000988	mg/kg	10.16.19 02.51	U	1
Total BTEX		<0.000988	0.000988	mg/kg	10.16.19 02.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	10.16.19 02.51	
4-Bromofluorobenzene	460-00-4	112	%	70-130	10.16.19 02.51	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#4 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-019	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**306**	49.4	mg/kg	10.16.19 12.08		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.15.19 22.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.15.19 22.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.15.19 22.21	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.15.19 22.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.15.19 22.21	
o-Terphenyl	84-15-1	97	%	70-135	10.15.19 22.21	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#4 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-019	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 18.10	Basis:	Wet Weight
Seq Number:	3104511				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	10.16.19 11.15	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	10.16.19 11.15	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	10.16.19 11.15	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	10.16.19 11.15	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	10.16.19 11.15	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	10.16.19 11.15	U	1
Total BTEX		<0.000998	0.000998	mg/kg	10.16.19 11.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	10.16.19 11.15	
4-Bromofluorobenzene	460-00-4	107	%	70-130	10.16.19 11.15	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#4 (2-2.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-020	Date Collected:	10.15.19 00.00	Sample Depth:	2 - 2.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.6**	10.0	mg/kg	10.16.19 12.28		1

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#4 (3-3.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-021	Date Collected:	10.15.19 00.00	Sample Depth:	3 - 3.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**604**	49.3	mg/kg	10.16.19 12.35		5

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#4 (4-4.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-022	Date Collected:	10.15.19 00.00	Sample Depth:	4 - 4.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**295**	50.2	mg/kg	10.16.19 12.42		5

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#5 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-023	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	10.16.19 12.49	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.15.19 22.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.15.19 22.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.15.19 22.41	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.15.19 22.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.15.19 22.41	
o-Terphenyl	84-15-1	93	%	70-135	10.15.19 22.41	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#5 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-023	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 18.10	Basis:	Wet Weight
Seq Number:	3104511				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	10.16.19 11.35	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	10.16.19 11.35	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	10.16.19 11.35	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	10.16.19 11.35	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	10.16.19 11.35	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	10.16.19 11.35	U	1
Total BTEX		<0.00101	0.00101	mg/kg	10.16.19 11.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	10.16.19 11.35	
1,4-Difluorobenzene	540-36-3	96	%	70-130	10.16.19 11.35	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#5 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-024	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.88	9.88	mg/kg	10.16.19 12.55	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.15.19 23.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.15.19 23.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.15.19 23.01	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.15.19 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	10.15.19 23.01	
o-Terphenyl	84-15-1	108	%	70-135	10.15.19 23.01	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#5 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-024	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 18.10	Basis:	Wet Weight
Seq Number:	3104511				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	10.16.19 11.56	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	10.16.19 11.56	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	10.16.19 11.56	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	10.16.19 11.56	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	10.16.19 11.56	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	10.16.19 11.56	U	1
Total BTEX		<0.000992	0.000992	mg/kg	10.16.19 11.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	10.16.19 11.56	
1,4-Difluorobenzene	540-36-3	102	%	70-130	10.16.19 11.56	

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Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#6 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-025	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6160**	497	mg/kg	10.16.19 13.02		50

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	10.15.19 23.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	**59.7**	50.3	mg/kg	10.15.19 23.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	10.15.19 23.21	U	1
Total TPH	PHC635	**59.7**	50.3	mg/kg	10.15.19 23.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	10.15.19 23.21	
o-Terphenyl	84-15-1	91	%	70-135	10.15.19 23.21	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#6 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-025	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 18.10	Basis:	Wet Weight
Seq Number:	3104511				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	10.16.19 12.16	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	10.16.19 12.16	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	10.16.19 12.16	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	10.16.19 12.16	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	10.16.19 12.16	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	10.16.19 12.16	U	1
Total BTEX		<0.00101	0.00101	mg/kg	10.16.19 12.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	10.16.19 12.16	
4-Bromofluorobenzene	460-00-4	111	%	70-130	10.16.19 12.16	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#6 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-026	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2060**	99.6	mg/kg	10.16.19 13.09		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	ELM			% Moisture:	
Analyst:	DTH	Date Prep:	10.16.19 11.10	Basis:	Wet Weight
Seq Number:	3104625				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.17.19 12.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.17.19 12.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.17.19 12.36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.17.19 12.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	10.17.19 12.36	
o-Terphenyl	84-15-1	115	%	70-135	10.17.19 12.36	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#6 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-026	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 18.10	Basis:	Wet Weight
Seq Number:	3104511				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	10.16.19 12.36	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	10.16.19 12.36	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	10.16.19 12.36	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	10.16.19 12.36	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	10.16.19 12.36	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	10.16.19 12.36	U	1
Total BTEX		<0.00101	0.00101	mg/kg	10.16.19 12.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	10.16.19 12.36	
1,4-Difluorobenzene	540-36-3	96	%	70-130	10.16.19 12.36	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#6 (2-2.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-027	Date Collected:	10.15.19 00.00	Sample Depth:	2 - 2.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9090**	497	mg/kg	10.16.19 13.29		50

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#7 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-028	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.0**	9.82	mg/kg	10.16.19 13.36		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.16.19 00.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.16.19 00.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.16.19 00.20	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.16.19 00.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	10.16.19 00.20	
o-Terphenyl	84-15-1	107	%	70-135	10.16.19 00.20	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#7 (0-1')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-028	Date Collected:	10.15.19 00.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 18.10	Basis:	Wet Weight
Seq Number:	3104511				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	10.16.19 12.57	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	10.16.19 12.57	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	10.16.19 12.57	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	10.16.19 12.57	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	10.16.19 12.57	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	10.16.19 12.57	U	1
Total BTEX		<0.00100	0.00100	mg/kg	10.16.19 12.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	10.16.19 12.57	
4-Bromofluorobenzene	460-00-4	111	%	70-130	10.16.19 12.57	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#7 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-029	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.1**	9.82	mg/kg	10.16.19 13.43		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.15.19 17.00	Basis:	Wet Weight
Seq Number:	3104513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.15.19 20.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	10.15.19 20.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.15.19 20.02	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	10.15.19 20.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.15.19 20.02	
o-Terphenyl	84-15-1	99	%	70-135	10.15.19 20.02	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#7 (1-1.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-029	Date Collected:	10.15.19 00.00	Sample Depth:	1 - 1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 18.10	Basis:	Wet Weight
Seq Number:	3104511				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	10.16.19 13.17	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	10.16.19 13.17	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	10.16.19 13.17	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	10.16.19 13.17	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	10.16.19 13.17	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	10.16.19 13.17	U	1
Total BTEX		<0.000994	0.000994	mg/kg	10.16.19 13.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	10.16.19 13.17	
4-Bromofluorobenzene	460-00-4	114	%	70-130	10.16.19 13.17	

Certificate of Analytical Results 640055

Tetra Tech- Midland, Midland, TX

Windward Fed 2H (710,19)

Sample Id:	**AH#7 (2-2.5')**	Matrix:	Soil	Date Received:	10.15.19 15.29
Lab Sample Id:	640055-030	Date Collected:	10.15.19 00.00	Sample Depth:	2 - 2.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.15.19 17.10	Basis:	Wet Weight
Seq Number:	3104489				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.6**	9.86	mg/kg	10.16.19 13.49		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 640055

Tetra Tech- Midland

Windward Fed 2H (710,19)

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3104578 — Matrix: Solid — Date Prep: 10.15.19
MB Sample Id: 7688189-1-BLK — LCS Sample Id: 7688189-1-BKS — LCSD Sample Id: 7688189-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	262	105	262	105	90-110	0	20	mg/kg	10.16.19 16:50	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3104489 — Matrix: Solid — Date Prep: 10.15.19
MB Sample Id: 7688190-1-BLK — LCS Sample Id: 7688190-1-BKS — LCSD Sample Id: 7688190-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	261	104	262	105	90-110	0	20	mg/kg	10.16.19 10:47	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3104578 — Matrix: Soil — Date Prep: 10.15.19
Parent Sample Id: 640049-001 — MS Sample Id: 640049-001 S — MSD Sample Id: 640049-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	64.5	4020	4020	98	3970	98	90-110	1	20	mg/kg	10.16.19 17:08	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3104578 — Matrix: Solid — Date Prep: 10.15.19
Parent Sample Id: 640055-010 — MS Sample Id: 640055-010 S — MSD Sample Id: 640055-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	27.0	198	235	105	236	105	90-110	0	20	mg/kg	10.16.19 18:40	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3104489 — Matrix: Soil — Date Prep: 10.15.19
Parent Sample Id: 640055-019 — MS Sample Id: 640055-019 S — MSD Sample Id: 640055-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	306	990	1260	96	1290	99	90-110	2	20	mg/kg	10.16.19 12:15	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 640055

Tetra Tech- Midland

Windward Fed 2H (710,19)

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3104489 Matrix: Solid Date Prep: 10.15.19
Parent Sample Id: 640055-030 MS Sample Id: 640055-030 S MSD Sample Id: 640055-030 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.6	198	223	107	225	107	90-110	1	20	mg/kg	10.16.19 13:56	

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3104456 Matrix: Solid Date Prep: 10.15.19
MB Sample Id: 7688185-1-BLK LCS Sample Id: 7688185-1-BKS LCSD Sample Id: 7688185-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1020	102	1040	104	70-135	2	35	mg/kg	10.15.19 19:02	
Diesel Range Organics (DRO)	<50.0	1000	862	86	874	87	70-135	1	35	mg/kg	10.15.19 19:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		112		128		70-135	%	10.15.19 19:02
o-Terphenyl	112		98		99		70-135	%	10.15.19 19:02

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3104513 Matrix: Solid Date Prep: 10.15.19
MB Sample Id: 7688235-1-BLK LCS Sample Id: 7688235-1-BKS LCSD Sample Id: 7688235-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	940	94	838	84	70-135	11	35	mg/kg	10.15.19 19:02	
Diesel Range Organics (DRO)	<50.0	1000	828	83	908	91	70-135	9	35	mg/kg	10.15.19 19:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		104		112		70-135	%	10.15.19 19:02
o-Terphenyl	99		96		114		70-135	%	10.15.19 19:02

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3104625 Matrix: Solid Date Prep: 10.16.19
MB Sample Id: 7688283-1-BLK LCS Sample Id: 7688283-1-BKS LCSD Sample Id: 7688283-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1000	100	1100	110	70-135	10	35	mg/kg	10.17.19 10:48	
Diesel Range Organics (DRO)	<50.0	1000	910	91	954	95	70-135	5	35	mg/kg	10.17.19 10:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		115		123		70-135	%	10.17.19 10:48
o-Terphenyl	98		110		121		70-135	%	10.17.19 10:48

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 640055

Tetra Tech- Midland

Windward Fed 2H (710,19)

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104456 — Matrix: Solid — Date Prep: 10.15.19
MB Sample Id: 7688185-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.15.19 18:41	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104513 — Matrix: Solid — Date Prep: 10.15.19
MB Sample Id: 7688235-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.15.19 18:41	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104625 — Matrix: Solid — Date Prep: 10.16.19
MB Sample Id: 7688283-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.17.19 10:28	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104456 — Matrix: Soil — Date Prep: 10.15.19
Parent Sample Id: 639787-008 — MS Sample Id: 639787-008 S — MSD Sample Id: 639787-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	971	97	952	95	70-135	2	35	mg/kg	10.15.19 20:22	
Diesel Range Organics (DRO)	<50.1	1000	947	95	804	80	70-135	16	35	mg/kg	10.15.19 20:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		108		70-135	%	10.15.19 20:22
o-Terphenyl	122		96		70-135	%	10.15.19 20:22

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 640055

Tetra Tech- Midland

Windward Fed 2H (710,19)

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104513 — Matrix: Soil — Date Prep: 10.15.19
Parent Sample Id: 640055-029 — MS Sample Id: 640055-029 S — MSD Sample Id: 640055-029 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	971	97	907	91	70-135	7	35	mg/kg	10.15.19 20:22	
Diesel Range Organics (DRO)	<50.0	1000	830	83	815	82	70-135	2	35	mg/kg	10.15.19 20:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		106		70-135	%	10.15.19 20:22
o-Terphenyl	99		102		70-135	%	10.15.19 20:22

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104625 — Matrix: Soil — Date Prep: 10.16.19
Parent Sample Id: 640116-001 — MS Sample Id: 640116-001 S — MSD Sample Id: 640116-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1080	108	995	100	70-135	8	35	mg/kg	10.17.19 12:16	
Diesel Range Organics (DRO)	<50.2	1000	1000	100	848	85	70-135	16	35	mg/kg	10.17.19 12:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		112		70-135	%	10.17.19 12:16
o-Terphenyl	109		105		70-135	%	10.17.19 12:16

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3104436 — Matrix: Solid — Date Prep: 10.15.19
MB Sample Id: 7688230-1-BLK — LCS Sample Id: 7688230-1-BKS — LCSD Sample Id: 7688230-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.100	100	0.101	101	70-130	1	35	mg/kg	10.15.19 19:15	
Toluene	<0.00100	0.100	0.0982	98	0.0986	99	70-130	0	35	mg/kg	10.15.19 19:15	
Ethylbenzene	<0.00100	0.100	0.103	103	0.103	103	71-129	0	35	mg/kg	10.15.19 19:15	
m,p-Xylenes	<0.00200	0.200	0.207	104	0.208	104	70-135	0	35	mg/kg	10.15.19 19:15	
o-Xylene	<0.00100	0.100	0.102	102	0.103	103	71-133	1	35	mg/kg	10.15.19 19:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		102		70-130	%	10.15.19 19:15
4-Bromofluorobenzene	102		102		104		70-130	%	10.15.19 19:15

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 640055

Tetra Tech- Midland

Windward Fed 2H (710,19)

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3104511 — Matrix: Solid — Date Prep: 10.15.19
MB Sample Id: 7688284-1-BLK — LCS Sample Id: 7688284-1-BKS — LCSD Sample Id: 7688284-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0932	93	0.0993	99	70-130	6	35	mg/kg	10.16.19 09:19	
Toluene	<0.00100	0.100	0.0899	90	0.0950	95	70-130	6	35	mg/kg	10.16.19 09:19	
Ethylbenzene	<0.00100	0.100	0.0924	92	0.0967	97	71-129	5	35	mg/kg	10.16.19 09:19	
m,p-Xylenes	<0.00200	0.200	0.185	93	0.193	97	70-135	4	35	mg/kg	10.16.19 09:19	
o-Xylene	<0.00100	0.100	0.0936	94	0.0989	99	71-133	6	35	mg/kg	10.16.19 09:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		104		105		70-130	%	10.16.19 09:19
4-Bromofluorobenzene	107		104		109		70-130	%	10.16.19 09:19

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3104436 — Matrix: Soil — Date Prep: 10.15.19
Parent Sample Id: 640076-001 — MS Sample Id: 640076-001 S — MSD Sample Id: 640076-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000996	0.0996	0.0370	37	0.0790	78	70-130	72	35	mg/kg	10.15.19 19:56	XF
Toluene	<0.000996	0.0996	0.0209	21	0.0673	67	70-130	105	35	mg/kg	10.15.19 19:56	XF
Ethylbenzene	<0.000996	0.0996	0.0108	11	0.0554	55	71-129	135	35	mg/kg	10.15.19 19:56	XF
m,p-Xylenes	<0.00199	0.199	0.0204	10	0.109	54	70-135	137	35	mg/kg	10.15.19 19:56	XF
o-Xylene	<0.000996	0.0996	0.0116	12	0.0565	56	71-133	132	35	mg/kg	10.15.19 19:56	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		70-130	%	10.15.19 19:56
4-Bromofluorobenzene	115		115		70-130	%	10.15.19 19:56

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3104511 — Matrix: Soil — Date Prep: 10.15.19
Parent Sample Id: 640055-029 — MS Sample Id: 640055-029 S — MSD Sample Id: 640055-029 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0610	61	0.0747	75	70-130	20	35	mg/kg	10.16.19 09:59	X
Toluene	<0.00100	0.100	0.0605	61	0.0710	71	70-130	16	35	mg/kg	10.16.19 09:59	X
Ethylbenzene	<0.00100	0.100	0.0625	63	0.0724	72	71-129	15	35	mg/kg	10.16.19 09:59	X
m,p-Xylenes	<0.00200	0.200	0.127	64	0.145	72	70-135	13	35	mg/kg	10.16.19 09:59	X
o-Xylene	<0.00100	0.100	0.0674	67	0.0751	75	71-133	11	35	mg/kg	10.16.19 09:59	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	10.16.19 09:59
4-Bromofluorobenzene	116		106		70-130	%	10.16.19 09:59

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: Concho	**Site Manager:** Mike Carmona
Project Name: Windward Fed 2H (710.19)	
Project Location: (county, state) Lea Co, NM	**Project #:** 212C-MD-01961
Invoice to: COG - Ike Tavarez	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	AH #1 (0-1')	10/15/2019			X				X			1	N	X		X												X							
	AH #1 (1-1.5')	10/15/2019			X				X			1	N	X		X												X							
	AH #1 (2-2.5')	10/15/2019			X				X			1	N															X							
	AH #1 (3-3.5')	10/15/2019			X				X			1	N															X							
	AH #1 (4-4.5')	10/15/2019			X				X			1	N															X							
	AH #1 (5-5.5')	10/15/2019			X				X			1	N															X							
	AH #1 (6-6.5')	10/15/2019			X				X			1	N															X							
	AH #2 (0-1')	10/15/2019			X				X			1	N	X		X												X							
	AH #2 (1-1.5')	10/15/2019			X				X			1	N	X		X												X							
	AH #2 (2-2.5')	10/15/2019			X				X			1	N															X							

Relinquished by: Tonna Mackey	Date: 10/15/19	Time: 15:29	Received by: [signature] Date: 10/15/19 Time: 1529
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature

8.0

REMARKS:

- ☐ STANDARD
- ☒ **RUSH:** Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

L640055

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: Concho	Site Manager: Mike Carmona
Project Name: Windward Fed 2H (7.10.19)	
Project Location: (county, state) Lea Co, NM	Project #: 212C-MD-01961
Invoice to: COG - Ike Tavarez	
Receiving Laboratory: Xenco	Sampler Signature: Conner Moehring
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	AH #2 (3-3.5')	10/15/2019			X				X		1	N															X								
	AH #2 (4-4.5')	10/15/2019			X				X		1	N															X								
	AH #3 (0-1')	10/15/2019			X				X		1	N	X		X												X								
	AH #3 (1-1.5')	10/15/2019			X				X		1	N	X		X												X								
	AH #3 (2-2.5')	10/15/2019			X				X		1	N															X								
	AH #3 (3-3.5')	10/15/2019			X				X		1	N															X								
	AH #3 (4-4.5')	10/15/2019			X				X		1	N															X								
	AH #4 (0-1')	10/15/2019			X				X		1	N															X								
	AH #4 (1-1.5')	10/15/2019			X				X		1	N	X		X												X								
	AH #4 (2-2.5')	10/15/2019			X				X		1	N	X		X												X								

Relinquished by: Conner Moehring Date: 10/15/19 Time: 1529

Received by: Date: 10/15/19 Time: 1529

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

ORIGINAL COPY

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB USE ONLY
Sample Temperature
8.0

REMARKS:
- ☐ STANDARD
- ☒ RUSH: Same Day 24 hr 48 hr (72 hr)
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Analysis Request of Chain of Custody Record

640255

Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: Concho	**Site Manager:** Mike Carmona
Project Name: Windward Fed 2H (7.10.19)	
Project Location: (county, state) Lea Co, NM	**Project #:** 212C-MD-01961
Invoice to: COG - Ike Tavarez	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None		# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	AH #4 (3-3.5')	10/15/2019			X				X			1	N															X							
	AH #4 (4-4.5')	10/15/2019			X				X			1	N															X							
	AH #5 (0-1')	10/15/2019			X				X			1	N	X		X												X							
	AH #5 (1-1.5')	10/15/2019			X				X			1	N	X		X												X							
	AH #6 (0-1')	10/15/2019			X				X			1	N	X		X												X							
	AH #6 (1-1.5')	10/15/2019			X				X			1	N	X		X												X							
	AH #6 (2-2.5')	10/15/2019			X				X			1	N															X							
	AH #7 (0-1')	10/15/2019			X				X			1	N	X		X												X							
	AH #7 (1-1.5')	10/15/2019			X				X			1	N	X		X												X							
	AH #7 (2-2.5')	10/15/2019			X				X			1	N															X							

Relinquished by: Conner Moehring	Date: 10/15/19	Time: 1529	Received by:	Date: 10/15/19	Time: 1529
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature 8.0

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 10/15/2019 03:29:00 PM

Work Order #: 640055

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 10/15/2019

Checklist reviewed by: Jessica Kramer Date: 10/17/2019

Certificate of Analysis Summary 645426

Tetra Tech- Midland, Midland, TX

Project Name: COG Windward Federal #2H (7.10.19)

Project Id: 212C-MD-01961
Contact: Mike Carmona
Project Location:

Date Received in Lab: Fri Dec-06-19 12:38 pm
Report Date: 10-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	645426-001		645426-002		645426-003		645426-004		645426-005		645426-006	
	Field Id:	AH-1 (0-1')		AH-1 (1'-1.5')		AH-1 (2'-2.5')		AH-1 (3'-3.5')		AH-1 (4'-4.5')		AH-1 (5'-5.5')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00	
Chloride by EPA 300	***Extracted:***	Dec-06-19 16:25		Dec-06-19 16:25		Dec-06-19 16:25		Dec-06-19 16:25		Dec-06-19 16:25		Dec-06-19 16:25	
	Analyzed:	Dec-06-19 19:30		Dec-06-19 19:35		Dec-06-19 19:40		Dec-06-19 19:46		Dec-06-19 19:51		Dec-06-19 19:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8.21	5.03	5.62	4.98	7.24	5.00	9.21	5.01	8.22	5.02	18.7	5.00

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 645426

Tetra Tech- Midland, Midland, TX

Project Name: COG Windward Federal #2H (7.10.19)

Project Id: 212C-MD-01961
Contact: Mike Carmona
Project Location:

Date Received in Lab: Fri Dec-06-19 12:38 pm
Report Date: 10-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	645426-007		645426-008		645426-009		645426-010		645426-011		645426-012	
	Field Id:	AH-1 (6'-6.5')		AH-2 (0-1')		AH-2 (1'-1.5')		AH-2 (2'-2.5')		AH-2 (3'-3.5')		AH-2 (4'-4.5')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00	
Chloride by EPA 300	***Extracted:***	Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00	
	Analyzed:	Dec-09-19 09:24		Dec-09-19 09:40		Dec-09-19 09:45		Dec-09-19 09:51		Dec-09-19 09:56		Dec-09-19 10:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		46.1	5.02	166	5.00	20.4	4.99	7.27	5.00	51.7	5.05	165	5.01

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 645426

Tetra Tech- Midland, Midland, TX

Project Name: COG Windward Federal #2H (7.10.19)

Project Id: 212C-MD-01961
Contact: Mike Carmona
Project Location:

Date Received in Lab: Fri Dec-06-19 12:38 pm
Report Date: 10-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	645426-013		645426-014		645426-015		645426-016		645426-017		645426-018	
	Field Id:	AH-3 (0-1')		AH-3 (1'-1.5')		AH-3 (2'-2.5')		AH-3 (3'-3.5')		AH-3 (4'-4.5')		AH-4 (0-1')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00	
Chloride by EPA 300	***Extracted:***	Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00	
	Analyzed:	Dec-09-19 10:17		Dec-09-19 10:23		Dec-09-19 10:28		Dec-09-19 10:33		Dec-09-19 10:39		Dec-09-19 10:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1030	4.97	628	4.99	19.8	4.95	13.1	5.03	29.3	5.01	757	4.99

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 645426

Tetra Tech- Midland, Midland, TX

Project Name: COG Windward Federal #2H (7.10.19)

Project Id: 212C-MD-01961
Contact: Mike Carmona
Project Location:

Date Received in Lab: Fri Dec-06-19 12:38 pm
Report Date: 10-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	645426-019		645426-020		645426-021		645426-022		645426-023		645426-024	
	Field Id:	AH-4 (1'-1.5')		AH-4 (2'-2.5')		AH-4 (3'-3.5')		AH-4 (4'-4.5')		AH-6 (0-1')		AH-6 (1'-1.5')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00		Dec-05-19 00:00	
Chloride by EPA 300	***Extracted:***	Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00		Dec-09-19 09:00	
	Analyzed:	Dec-09-19 11:00		Dec-09-19 11:16		Dec-09-19 11:21		Dec-09-19 11:27		Dec-09-19 11:32		Dec-09-19 11:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1650	25.0	2370	25.1	1770	24.9	4410	25.0	4500	25.0	4650	49.7

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 645426

Tetra Tech- Midland, Midland, TX

Project Name: COG Windward Federal #2H (7.10.19)

Project Id: 212C-MD-01961
Contact: Mike Carmona
Project Location:

Date Received in Lab: Fri Dec-06-19 12:38 pm
Report Date: 10-DEC-19
Project Manager: Jessica Kramer

Analysis Requested								
	Lab Id:	645426-025						
	Field Id:	AH-6 (2'-2.5')						
	Depth:							
	Matrix:	SOIL						
	Sampled:	Dec-05-19 00:00						
Chloride by EPA 300	***Extracted:***	Dec-09-19 09:00						
	Analyzed:	Dec-09-19 11:43						
	Units/RL:	mg/kg	RL					
Chloride		5420	50.4					

Jessica Kramer
Project Assistant

Analytical Report 645426

for

Tetra Tech- Midland

Project Manager: Mike Carmona

COG Windward Federal #2H (7.10.19)

212C-MD-01961

10-DEC-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

10-DEC-19

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: XENCO Report No(s): **645426**
COG Windward Federal #2H (7.10.19)
Project Address:

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 645426. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 645426 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 (0-1')	S	12-05-19 00:00		645426-001
AH-1 (1'-1.5')	S	12-05-19 00:00		645426-002
AH-1 (2'-2.5')	S	12-05-19 00:00		645426-003
AH-1 (3'-3.5')	S	12-05-19 00:00		645426-004
AH-1 (4'-4.5')	S	12-05-19 00:00		645426-005
AH-1 (5'-5.5')	S	12-05-19 00:00		645426-006
AH-1 (6'-6.5')	S	12-05-19 00:00		645426-007
AH-2 (0-1')	S	12-05-19 00:00		645426-008
AH-2 (1'-1.5')	S	12-05-19 00:00		645426-009
AH-2 (2'-2.5')	S	12-05-19 00:00		645426-010
AH-2 (3'-3.5')	S	12-05-19 00:00		645426-011
AH-2 (4'-4.5')	S	12-05-19 00:00		645426-012
AH-3 (0-1')	S	12-05-19 00:00		645426-013
AH-3 (1'-1.5')	S	12-05-19 00:00		645426-014
AH-3 (2'-2.5')	S	12-05-19 00:00		645426-015
AH-3 (3'-3.5')	S	12-05-19 00:00		645426-016
AH-3 (4'-4.5')	S	12-05-19 00:00		645426-017
AH-4 (0-1')	S	12-05-19 00:00		645426-018
AH-4 (1'-1.5')	S	12-05-19 00:00		645426-019
AH-4 (2'-2.5')	S	12-05-19 00:00		645426-020
AH-4 (3'-3.5')	S	12-05-19 00:00		645426-021
AH-4 (4'-4.5')	S	12-05-19 00:00		645426-022
AH-6 (0-1')	S	12-05-19 00:00		645426-023
AH-6 (1'-1.5')	S	12-05-19 00:00		645426-024
AH-6 (2'-2.5')	S	12-05-19 00:00		645426-025

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: COG Windward Federal #2H (7.10.19)

Project ID: *212C-MD-01961*
Work Order Number(s): *645426*

Report Date: *10-DEC-19*
Date Received: *12/06/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-1 (0-1')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-001	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.06.19 16.25	Basis:	Wet Weight
Seq Number:	3109714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.21**	5.03	mg/kg	12.06.19 19.30		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-1 (1'-1.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-002	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.06.19 16.25	Basis:	Wet Weight
Seq Number:	3109714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.62**	4.98	mg/kg	12.06.19 19.35		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-1 (2'-2.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-003	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.06.19 16.25	Basis:	Wet Weight
Seq Number:	3109714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.24**	5.00	mg/kg	12.06.19 19.40		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-1 (3'-3.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-004	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.06.19 16.25	Basis:	Wet Weight
Seq Number:	3109714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.21**	5.01	mg/kg	12.06.19 19.46		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-1 (4'-4.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-005	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.06.19 16.25	Basis:	Wet Weight
Seq Number:	3109714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.22**	5.02	mg/kg	12.06.19 19.51		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-1 (5'-5.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-006	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.06.19 16.25	Basis:	Wet Weight
Seq Number:	3109714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18.7**	5.00	mg/kg	12.06.19 19.56		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-1 (6'-6.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-007	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.1**	5.02	mg/kg	12.09.19 09.24		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-2 (0-1')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-008	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**166**	5.00	mg/kg	12.09.19 09.40		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-2 (1'-1.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-009	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.4**	4.99	mg/kg	12.09.19 09.45		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-2 (2'-2.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-010	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.27**	5.00	mg/kg	12.09.19 09.51		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-2 (3'-3.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-011	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.7**	5.05	mg/kg	12.09.19 09.56		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-2 (4'-4.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-012	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**165**	5.01	mg/kg	12.09.19 10.12		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-3 (0-1')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-013	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1030**	4.97	mg/kg	12.09.19 10.17		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-3 (1'-1.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-014	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**628**	4.99	mg/kg	12.09.19 10.23		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-3 (2'-2.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-015	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.8**	4.95	mg/kg	12.09.19 10.28		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-3 (3'-3.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-016	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.1**	5.03	mg/kg	12.09.19 10.33		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-3 (4'-4.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-017	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.3**	5.01	mg/kg	12.09.19 10.39		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-4 (0-1')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-018	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**757**	4.99	mg/kg	12.09.19 10.55		1

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-4 (1'-1.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-019	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1650**	25.0	mg/kg	12.09.19 11.00		5

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-4 (2'-2.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-020	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2370**	25.1	mg/kg	12.09.19 11.16		5

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-4 (3'-3.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-021	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1770**	24.9	mg/kg	12.09.19 11.21		5

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-4 (4'-4.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-022	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4410**	25.0	mg/kg	12.09.19 11.27		5

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-6 (0-1')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-023	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4500**	25.0	mg/kg	12.09.19 11.32		5

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-6 (1'-1.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-024	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4650**	49.7	mg/kg	12.09.19 11.37		10

Certificate of Analytical Results 645426

Tetra Tech- Midland, Midland, TX

COG Windward Federal #2H (7.10.19)

Sample Id:	**AH-6 (2'-2.5')**	Matrix:	Soil	Date Received:	12.06.19 12.38
Lab Sample Id:	645426-025	Date Collected:	12.05.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.09.19 09.00	Basis:	Wet Weight
Seq Number:	3109876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5420**	50.4	mg/kg	12.09.19 11.43		10

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 645426

Tetra Tech- Midland

COG Windward Federal #2H (7.10.19)

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109714 — Matrix: Solid — Date Prep: 12.06.19
MB Sample Id: 7691910-1-BLK — LCS Sample Id: 7691910-1-BKS — LCSD Sample Id: 7691910-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	242	97	243	97	90-110	0	20	mg/kg	12.06.19 17:22	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109876 — Matrix: Solid — Date Prep: 12.09.19
MB Sample Id: 7691936-1-BLK — LCS Sample Id: 7691936-1-BKS — LCSD Sample Id: 7691936-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	262	105	265	106	90-110	1	20	mg/kg	12.09.19 09:13	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109714 — Matrix: Soil — Date Prep: 12.06.19
Parent Sample Id: 645404-013 — MS Sample Id: 645404-013 S — MSD Sample Id: 645404-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.5	250	258	96	263	98	90-110	2	20	mg/kg	12.06.19 17:38	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109714 — Matrix: Soil — Date Prep: 12.06.19
Parent Sample Id: 645404-023 — MS Sample Id: 645404-023 S — MSD Sample Id: 645404-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19.7	249	266	99	262	97	90-110	2	20	mg/kg	12.06.19 18:52	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109876 — Matrix: Soil — Date Prep: 12.09.19
Parent Sample Id: 645426-007 — MS Sample Id: 645426-007 S — MSD Sample Id: 645426-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	46.1	251	285	95	290	97	90-110	2	20	mg/kg	12.09.19 09:29	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 645426

Tetra Tech- Midland

COG Windward Federal #2H (7.10.19)

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3109876 Matrix: Soil Date Prep: 12.09.19

Parent Sample Id: 645426-017 MS Sample Id: 645426-017 S MSD Sample Id: 645426-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.3	251	274	97	271	96	90-110	1	20	mg/kg	12.09.19 10:44	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Analysis Request of Chain of Custody Record

1045426

Tetra Tech, Inc.

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

Client Name: COG	**Site Manager:** Mike Carmona
Project Name: Windward Federal #2H (7.10.19)	
Project Location: (county, state) Lea County, NM	**Project #:** 212C-MD-01961
Invoice to: COG	
Receiving Laboratory: Xenco	**Sampler Signature:** Devin D
Comments: Copy Ike Tavarez for results	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	AH-1 (0-1')	12.5.19			X				X		1	N														X								
	AH-1 (1'-1.5')	12.5.19			X				X		1	N														X								
	AH-1 (2'-2.5')	12.5.19			X				X		1	N														X								
	AH-1 (3'-3.5')	12.5.19			X				X		1	N														X								
	AH-1 (4'-4.5')	12.5.19			X				X		1	N														X								
	AH-1 (5'-5.5')	12.5.19			X				X		1	N														X								
	AH-1 (6'-6.5')	12.5.19			X				X		1	N														X								
	AH-2 (0-1')	12.5.19			X				X		1	N														X								
	AH-2 (1'-1.5')	12.5.19			X				X		1	N														X								
	AH-2 (2'-2.5')	12.5.19			X				X		1	N														X								

Relinquished by:	Date: 12.6.19	Time: 1327	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Received by: Date: 12/6/19 Time: 1328

Received by: Date: Time:

Received by: Date: Time:

LAB USE ONLY

Sample Temperature 5.3

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

645426

Page 2 of 3

Tetra Tech, Inc.

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

Client Name: COG	**Site Manager:** Mike Carmona
Project Name: Windward Federal #2H (7.10.19)	
Project Location: (county, state) Lea County, NM	**Project #:** 212C-MD-01961
Invoice to: COG	
Receiving Laboratory: Xenco	**Sampler Signature:** Devin D
Comments: Copy Ike Tavarez for results	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Hold
	AH-2 (3'-3.5')	12.5.19			X			X		1	N														X				
	AH-2 (4'-4.5')	12.5.19			X			X		1	N														X				
	AH-3 (0-1')	12.5.19			X			X		1	N														X				
	AH-3 (1'-1.5')	12.5.19			X			X		1	N														X				
	AH-3 (2'-2.5')	12.5.19			X			X		1	N														X				
	AH-3 (3'-3.5')	12.5.19			X			X		1	N														X				
	AH-3 (4'-4.5')	12.5.19			X			X		1	N														X				
	AH-4 (0-1')	12.5.19			X			X		1	N														X				
	AH-4 (1'-1.5')	12.5.19			X			X		1	N														X				
	AH-4 (2'-2.5')	12.5.19			X			X		1	N														X				

Relinquished by:	Date: 12.6.19	Time: 1328	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Received by: Date: 12/10/19 Time: 1328

LAB USE ONLY

Sample Temperature 5.3

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

645426

Page 3 of 3

Tetra Tech, Inc.

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

Client Name: COG
Site Manager: Mike Carmona
Project Name: Windward Federal #2H (7.10.19)
Project Location: (county, state) Lea County, NM
Project #: 212C-MD-01961
Invoice to: COG
Receiving Laboratory: Xenco
Sampler Signature: Devin D
Comments: Copy Ike Tavarez for results

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	TIME	MATRIX WATER	SOIL		PRESERVATIVE METHOD HCL	HNO_3	ICE	None		# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	AH-4 (3'-3.5')	12.5.19			X				X			1	N															X								
	AH-4 (4'-4.5')	12.5.19			X				X			1	N															X								
	AH-6 (0-1')	12.5.19			X				X			1	N															X								
	AH-6 (1'-1.5')	12.5.19			X				X			1	N															X								
	AH-6 (2'-2.5')	12.5.19			X				X			1	N															X								

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	12.6.19	1328	[signature]	12/6/19	1328
Relinquished by: [signature]	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY
Sample Temperature 5.3

REMARKS:
☐ STANDARD
☒ RUSH: Same Day 24 hr 48 hr (72 hr)
☐ Rush Charges Authorized
☐ Special Report Limits or TRRP Report

(Circle) (HAND DELIVERED) FEDEX UPS Tracking #:

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Certificate of Analysis Summary 658538

Tetra Tech- Midland, Midland, TX

Project Name: Windward Federal #002H (7.10.19)

Project Id: 212C-MD-01961
Contact: Mike Carmona
Project Location: Lea County, New Mexcio

Date Received in Lab: Fri 04.10.2020 09:32
Report Date: 04.13.2020 11:24
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	658538-001		658538-002		658538-003		658538-004		658538-005	
	Field Id:	AH-4 0-1'		AH-4 1'-1.5'		AH-4 2'-2.5'		AH-4 3'-3.5		AH-4 4'-4.5'	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.09.2020 00:00		04.09.2020 00:00		04.09.2020 00:00		04.09.2020 00:00		04.09.2020 00:00	
Chloride by EPA 300	***Extracted:***	04.10.2020 14:50		04.10.2020 14:50		04.10.2020 14:50		04.10.2020 14:50		04.10.2020 14:50	
	Analyzed:	04.10.2020 17:18		04.10.2020 17:23		04.10.2020 17:28		04.10.2020 17:34		04.10.2020 17:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.02	5.02	<4.96	4.96	<4.99	4.99	23.6	4.99	10.3	4.99

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager

Analytical Report 658538

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Windward Federal #002H (7.10.19)

212C-MD-01961

04.13.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

04.13.2020

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: XENCO Report No(s): **658538**
Windward Federal #002H (7.10.19)
Project Address: Lea County, New Mexcio

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 658538. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 658538 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Sample Cross Reference 658538

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-4 0-1'	S	04.09.2020 00:00		658538-001
AH-4 1'-1.5'	S	04.09.2020 00:00		658538-002
AH-4 2'-2.5'	S	04.09.2020 00:00		658538-003
AH-4 3'-3.5	S	04.09.2020 00:00		658538-004
AH-4 4'-4.5'	S	04.09.2020 00:00		658538-005

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Windward Federal #002H (7.10.19)

Project ID:	*212C-MD-01961*	Report Date:	*04.13.2020*
Work Order Number(s):	*658538*	Date Received:	*04.10.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 658538

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**AH-4 0-1'**	Matrix:	Soil	Date Received:	04.10.2020 09:32
Lab Sample Id:	658538-001	Date Collected:	04.09.2020 00:00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.2020 14:50	Basis:	Wet Weight
Seq Number:	3122714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	04.10.2020 17:18	U	1

Certificate of Analytical Results 658538

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**AH-4 1'-1.5'**	Matrix:	Soil	Date Received:	04.10.2020 09:32
Lab Sample Id:	658538-002	Date Collected:	04.09.2020 00:00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.2020 14:50	Basis:	Wet Weight
Seq Number:	3122714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	04.10.2020 17:23	U	1

Certificate of Analytical Results 658538

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**AH-4 2'-2.5'**	Matrix:	Soil	Date Received:	04.10.2020 09:32
Lab Sample Id:	658538-003	Date Collected:	04.09.2020 00:00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.2020 14:50	Basis:	Wet Weight
Seq Number:	3122714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	04.10.2020 17:28	U	1

Certificate of Analytical Results 658538

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**AH-4 3'-3.5**	Matrix:	Soil	Date Received:	04.10.2020 09:32
Lab Sample Id:	658538-004	Date Collected:	04.09.2020 00:00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.2020 14:50	Basis:	Wet Weight
Seq Number:	3122714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.6**	4.99	mg/kg	04.10.2020 17:34		1

Certificate of Analytical Results 658538

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**AH-4 4'-4.5'**	Matrix:	Soil	Date Received:	04.10.2020 09:32
Lab Sample Id:	658538-005	Date Collected:	04.09.2020 00:00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.2020 14:50	Basis:	Wet Weight
Seq Number:	3122714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.3**	4.99	mg/kg	04.10.2020 17:39		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 658538

Tetra Tech- Midland

Windward Federal #002H (7.10.19)

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3122714 Matrix: Solid Date Prep: 04.10.2020
MB Sample Id: 7701058-1-BLK LCS Sample Id: 7701058-1-BKS LCSD Sample Id: 7701058-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	255	102	254	102	90-110	0	20	mg/kg	04.10.2020 15:06	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3122714 Matrix: Soil Date Prep: 04.10.2020
Parent Sample Id: 658394-023 MS Sample Id: 658394-023 S MSD Sample Id: 658394-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.04	252	258	102	263	104	90-110	2	20	mg/kg	04.10.2020 15:22	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3122714 Matrix: Soil Date Prep: 04.10.2020
Parent Sample Id: 658394-024 MS Sample Id: 658394-024 S MSD Sample Id: 658394-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.03	252	254	101	256	102	90-110	1	20	mg/kg	04.10.2020 16:36	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech, Inc.

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

Client Name: Concho	**Site Manager:** Mike Carmona
Project Name: Windward Federal #002H (7.10.19)	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-01961
Invoice to: Ike Tavarez	
Receiving Laboratory: Xenco	**Sampler Signature:** Devin Dominguez
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)
	AH-4 0-1'	4/9/2020			X				X			1	N
	AH-4 1'-1.5'	4/9/2020			X				X			1	N
	AH-4 2'-2.5'	4/9/2020			X				X			1	N
	AH-4 3'-3.5'	4/9/2020			X				X			1	N
	AH-4 4'-4.5'	4/9/2020			X				X			1	N

ANALYSIS REQUEST
(Circle or Specify Method No.)

BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R			Hold
														X							
														X							
														X							
														X							
														X							
														X							

Relinquished by: Date: 4/10 Time: 0932
Received by: Date: 4/10 Time: 0932

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

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

LAB USE ONLY
Sample Temperature 25/2.3

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 04.10.2020 09.32.00 AM

Work Order #: 658538

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 04.10.2020

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 04.13.2020

Jessica Kramer

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Certificate of Analysis Summary 665852

Tetra Tech- Midland, Midland, TX

Project Name: Windward Federal #002H (7.10.19)

Project Id: 212C-MD-01961
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Mon 06.29.2020 14:50
Report Date: 07.02.2020 17:37
Project Manager: Jessica Kramer

Analysis Requested		665852-001		665852-002		665852-003		665852-004		665852-005		665852-006	
	Field Id:	Bottomhole-1 comp 2'		NSW-1 comp 2'		WSW-1 comp 2'		SSW-1 comp 2'		ESW-1 comp 2'		Bottomhole-2 comp 4.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	06.25.2020 00:00		06.25.2020 00:00		06.25.2020 00:00		06.25.2020 00:00		06.25.2020 00:00		06.25.2020 00:00	
BTEX by EPA 8021B	***Extracted:***	06.30.2020 17:00		06.30.2020 17:00		06.30.2020 17:00		06.30.2020 17:00		06.30.2020 17:00		06.30.2020 17:00	
	Analyzed:	06.30.2020 21:24		06.30.2020 21:45		06.30.2020 22:05		06.30.2020 22:26		06.30.2020 22:46		06.30.2020 23:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	06.30.2020 10:00		06.30.2020 10:00		06.30.2020 10:00		06.30.2020 10:00		06.30.2020 10:00		06.30.2020 10:00	
	Analyzed:	06.30.2020 10:38		06.30.2020 12:07		06.30.2020 12:26		06.30.2020 12:32		06.30.2020 12:51		06.30.2020 12:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		66.8	4.96	70.4	5.00	66.2	5.03	64.7	4.96	56.4	4.99	33.9	4.98
TPH by SW8015 Mod	***Extracted:***	06.29.2020 17:00		06.29.2020 17:00		06.29.2020 17:00		06.29.2020 17:00		06.29.2020 17:00		06.29.2020 17:00	
	Analyzed:	06.29.2020 21:31		06.29.2020 21:51		06.29.2020 22:10		06.29.2020 22:29		06.29.2020 22:48		06.29.2020 23:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.8	49.8	<49.9	49.9
Diesel Range Organics (DRO)		<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.8	49.8	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.8	49.8	<49.9	49.9
Total TPH		<49.9	49.9	<50.0	50.0	<49.9	49.9	<49.8	49.8	<49.8	49.8	<49.9	49.9

BRL - Below Reporting Limit

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Certificate of Analysis Summary 665852

Tetra Tech- Midland, Midland, TX

Project Name: Windward Federal #002H (7.10.19)

Project Id: 212C-MD-01961
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Mon 06.29.2020 14:50
Report Date: 07.02.2020 17:37
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	665852-007		665852-008		665852-009		665852-010					
	Field Id:	NSW-2 comp 4.5'		WSW-2 comp 4.5'		SSW-2 comp 4.5'		ESW-2 comp 4.5'					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	06.25.2020 00:00		06.25.2020 00:00		06.25.2020 00:00		06.25.2020 00:00					
BTEX by EPA 8021B	***Extracted:***	06.30.2020 17:00		06.30.2020 17:00		06.30.2020 17:00		06.30.2020 17:00					
	Analyzed:	06.30.2020 23:27		06.30.2020 23:47		07.01.2020 00:07		07.01.2020 00:28					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00397	0.00397	<0.00398	0.00398	<0.00399	0.00399	<0.00401	0.00401				
o-Xylene		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	06.30.2020 10:00		06.30.2020 10:00		06.30.2020 10:00		06.30.2020 10:00					
	Analyzed:	06.30.2020 13:04		06.30.2020 13:10		06.30.2020 13:17		06.30.2020 13:23					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		32.2	4.95	32.2	4.97	31.6	5.05	29.9	5.02				
TPH by SW8015 Mod	***Extracted:***	06.29.2020 17:00		06.29.2020 17:00		06.29.2020 17:00		06.29.2020 17:00					
	Analyzed:	06.29.2020 23:26		06.29.2020 23:45		06.30.2020 00:04		06.30.2020 00:23					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8				
Diesel Range Organics (DRO)		<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8				
Total TPH		<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.8	49.8				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Analytical Report 665852

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Windward Federal #002H (7.10.19)

212C-MD-01961

07.02.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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07.02.2020

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **665852**
Windward Federal #002H (7.10.19)
Project Address: Lea County, New Mexico

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 665852. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 665852 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

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Sample Cross Reference 665852

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottomhole-1 comp 2'	S	06.25.2020 00:00		665852-001
NSW-1 comp 2'	S	06.25.2020 00:00		665852-002
WSW-1 comp 2'	S	06.25.2020 00:00		665852-003
SSW-1 comp 2'	S	06.25.2020 00:00		665852-004
ESW-1 comp 2'	S	06.25.2020 00:00		665852-005
Bottomhole-2 comp 4.5'	S	06.25.2020 00:00		665852-006
NSW-2 comp 4.5'	S	06.25.2020 00:00		665852-007
WSW-2 comp 4.5'	S	06.25.2020 00:00		665852-008
SSW-2 comp 4.5'	S	06.25.2020 00:00		665852-009
ESW-2 comp 4.5'	S	06.25.2020 00:00		665852-010

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Windward Federal #002H (7.10.19)

Project ID: *212C-MD-01961*
Work Order Number(s): *665852*

Report Date: *07.02.2020*
Date Received: *06.29.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 665852

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **Bottomhole-1 comp 2'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-001 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.8**	4.96	mg/kg	06.30.2020 10:38		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.29.2020 21:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.29.2020 21:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.29.2020 21:31	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.29.2020 21:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	06.29.2020 21:31	
o-Terphenyl	84-15-1	102	%	70-130	06.29.2020 21:31	

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Certificate of Analytical Results 665852

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**Bottomhole-1 comp 2'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-001	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.2020 21:24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.2020 21:24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.2020 21:24	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.30.2020 21:24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.2020 21:24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.2020 21:24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.2020 21:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	06.30.2020 21:24	
1,4-Difluorobenzene	540-36-3	91	%	70-130	06.30.2020 21:24	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **NSW-1 comp 2'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-002 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**70.4**	5.00	mg/kg	06.30.2020 12:07		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	06.29.2020 21:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	06.29.2020 21:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	06.29.2020 21:51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	06.29.2020 21:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-130	06.29.2020 21:51	
o-Terphenyl	84-15-1	102	%	70-130	06.29.2020 21:51	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**NSW-1 comp 2'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-002	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.30.2020 21:45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.30.2020 21:45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.30.2020 21:45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.30.2020 21:45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.30.2020 21:45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.30.2020 21:45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.30.2020 21:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.30.2020 21:45	
1,4-Difluorobenzene	540-36-3	89	%	70-130	06.30.2020 21:45	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **WSW-1 comp 2'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-003 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.2**	5.03	mg/kg	06.30.2020 12:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.29.2020 22:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.29.2020 22:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.29.2020 22:10	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.29.2020 22:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-130	06.29.2020 22:10	
o-Terphenyl	84-15-1	102	%	70-130	06.29.2020 22:10	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**WSW-1 comp 2'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-003	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.2020 22:05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.2020 22:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.2020 22:05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.30.2020 22:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.2020 22:05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.2020 22:05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.2020 22:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	06.30.2020 22:05	
4-Bromofluorobenzene	460-00-4	107	%	70-130	06.30.2020 22:05	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **SSW-1 comp 2'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-004 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**64.7**	4.96	mg/kg	06.30.2020 12:32		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.29.2020 22:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.29.2020 22:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.29.2020 22:29	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.29.2020 22:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-130	06.29.2020 22:29	
o-Terphenyl	84-15-1	100	%	70-130	06.29.2020 22:29	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**SSW-1 comp 2'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-004	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.2020 22:26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.2020 22:26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.2020 22:26	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.30.2020 22:26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.2020 22:26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.2020 22:26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.2020 22:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.30.2020 22:26	
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.30.2020 22:26	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **ESW-1 comp 2'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-005 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.4**	4.99	mg/kg	06.30.2020 12:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.29.2020 22:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.29.2020 22:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.29.2020 22:48	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.29.2020 22:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-130	06.29.2020 22:48	
o-Terphenyl	84-15-1	100	%	70-130	06.29.2020 22:48	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**ESW-1 comp 2'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-005	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.30.2020 22:46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.30.2020 22:46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.30.2020 22:46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.30.2020 22:46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.30.2020 22:46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.30.2020 22:46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.30.2020 22:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.30.2020 22:46	
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.30.2020 22:46	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **Bottomhole-2 comp 4.5'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-006 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.9**	4.98	mg/kg	06.30.2020 12:58		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.29.2020 23:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.29.2020 23:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.29.2020 23:07	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.29.2020 23:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-130	06.29.2020 23:07	
o-Terphenyl	84-15-1	103	%	70-130	06.29.2020 23:07	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**Bottomhole-2 comp 4.5'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-006	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.30.2020 23:06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.30.2020 23:06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.30.2020 23:06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.30.2020 23:06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.30.2020 23:06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.30.2020 23:06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.30.2020 23:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.30.2020 23:06	
4-Bromofluorobenzene	460-00-4	121	%	70-130	06.30.2020 23:06	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **NSW-2 comp 4.5'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-007 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.2**	4.95	mg/kg	06.30.2020 13:04		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.29.2020 23:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.29.2020 23:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.29.2020 23:26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.29.2020 23:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	06.29.2020 23:26	
o-Terphenyl	84-15-1	97	%	70-130	06.29.2020 23:26	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**NSW-2 comp 4.5'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-007	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.30.2020 23:27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.30.2020 23:27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.30.2020 23:27	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.30.2020 23:27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.30.2020 23:27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.30.2020 23:27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.30.2020 23:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	06.30.2020 23:27	
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.30.2020 23:27	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **WSW-2 comp 4.5'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-008 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.2**	4.97	mg/kg	06.30.2020 13:10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	06.29.2020 23:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	06.29.2020 23:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	06.29.2020 23:45	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	06.29.2020 23:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-130	06.29.2020 23:45	
o-Terphenyl	84-15-1	100	%	70-130	06.29.2020 23:45	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**WSW-2 comp 4.5'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-008	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.30.2020 23:47	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.30.2020 23:47	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.30.2020 23:47	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.30.2020 23:47	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.30.2020 23:47	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.30.2020 23:47	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.30.2020 23:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	06.30.2020 23:47	
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.30.2020 23:47	

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Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **SSW-2 comp 4.5'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-009 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.6**	5.05	mg/kg	06.30.2020 13:17		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	06.30.2020 00:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	06.30.2020 00:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	06.30.2020 00:04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	06.30.2020 00:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	06.30.2020 00:04	
o-Terphenyl	84-15-1	99	%	70-130	06.30.2020 00:04	

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Certificate of Analytical Results 665852

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**SSW-2 comp 4.5'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-009	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.01.2020 00:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.01.2020 00:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.01.2020 00:07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.01.2020 00:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.01.2020 00:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.01.2020 00:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.01.2020 00:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	07.01.2020 00:07	
4-Bromofluorobenzene	460-00-4	120	%	70-130	07.01.2020 00:07	

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Certificate of Analytical Results 665852

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id: **ESW-2 comp 4.5'** Matrix: Soil Date Received:06.29.2020 14:50

Lab Sample Id: 665852-010 Date Collected: 06.25.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 06.30.2020 10:00 Basis: Wet Weight

Seq Number: 3130352

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.9**	5.02	mg/kg	06.30.2020 13:23		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 06.29.2020 17:00 Basis: Wet Weight

Seq Number: 3130347

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.30.2020 00:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.30.2020 00:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.30.2020 00:23	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.30.2020 00:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	06.30.2020 00:23	
o-Terphenyl	84-15-1	100	%	70-130	06.30.2020 00:23	

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Certificate of Analytical Results 665852

Tetra Tech- Midland, Midland, TX

Windward Federal #002H (7.10.19)

Sample Id:	**ESW-2 comp 4.5'**	Matrix:	Soil	Date Received:	06.29.2020 14:50
Lab Sample Id:	665852-010	Date Collected:	06.25.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	06.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3130446				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.01.2020 00:28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.01.2020 00:28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.01.2020 00:28	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.01.2020 00:28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.01.2020 00:28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.01.2020 00:28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.01.2020 00:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	07.01.2020 00:28	
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.01.2020 00:28	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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QC Summary 665852

Tetra Tech- Midland

Windward Federal #002H (7.10.19)

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3130352 — Matrix: Solid — Date Prep: 06.30.2020
MB Sample Id: 7706438-1-BLK — LCS Sample Id: 7706438-1-BKS — LCSD Sample Id: 7706438-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	250	100	250	100	90-110	0	20	mg/kg	06.30.2020 10:25	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3130352 — Matrix: Soil — Date Prep: 06.30.2020
Parent Sample Id: 665852-001 — MS Sample Id: 665852-001 S — MSD Sample Id: 665852-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	66.8	248	332	107	321	103	90-110	3	20	mg/kg	06.30.2020 10:44	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3130352 — Matrix: Soil — Date Prep: 06.30.2020
Parent Sample Id: 665852-002 — MS Sample Id: 665852-002 S — MSD Sample Id: 665852-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	70.4	250	325	102	333	105	90-110	2	20	mg/kg	06.30.2020 12:13	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3130347 — Matrix: Solid — Date Prep: 06.29.2020
MB Sample Id: 7706403-1-BLK — LCS Sample Id: 7706403-1-BKS — LCSD Sample Id: 7706403-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1080	108	1070	107	70-130	1	20	mg/kg	06.29.2020 18:59	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1080	108	70-130	2	20	mg/kg	06.29.2020 18:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		128		127		70-130	%	06.29.2020 18:59
o-Terphenyl	122		122		123		70-130	%	06.29.2020 18:59

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3130347 — Matrix: Solid — Date Prep: 06.29.2020
MB Sample Id: 7706403-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	06.29.2020 18:39	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

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QC Summary 665852

Tetra Tech- Midland

Windward Federal #002H (7.10.19)

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3130347 Matrix: Soil Date Prep: 06.29.2020
Parent Sample Id: 665689-001 MS Sample Id: 665689-001 S MSD Sample Id: 665689-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	999	100	981	98	70-130	2	20	mg/kg	06.29.2020 19:56	
Diesel Range Organics (DRO)	<49.9	997	1020	102	992	99	70-130	3	20	mg/kg	06.29.2020 19:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		121		70-130	%	06.29.2020 19:56
o-Terphenyl	106		106		70-130	%	06.29.2020 19:56

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3130446 Matrix: Solid Date Prep: 06.30.2020
MB Sample Id: 7706513-1-BLK LCS Sample Id: 7706513-1-BKS LCSD Sample Id: 7706513-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.115	115	0.0993	99	70-130	15	35	mg/kg	06.30.2020 18:57	
Toluene	<0.00200	0.100	0.107	107	0.0959	96	70-130	11	35	mg/kg	06.30.2020 18:57	
Ethylbenzene	<0.00200	0.100	0.109	109	0.101	101	70-130	8	35	mg/kg	06.30.2020 18:57	
m,p-Xylenes	<0.00400	0.200	0.218	109	0.199	100	70-130	9	35	mg/kg	06.30.2020 18:57	
o-Xylene	<0.00200	0.100	0.111	111	0.103	103	70-130	7	35	mg/kg	06.30.2020 18:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		97		95		70-130	%	06.30.2020 18:57
4-Bromofluorobenzene	108		111		112		70-130	%	06.30.2020 18:57

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3130446 Matrix: Soil Date Prep: 06.30.2020
Parent Sample Id: 665852-001 MS Sample Id: 665852-001 S MSD Sample Id: 665852-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.103	104	0.103	104	70-130	0	35	mg/kg	06.30.2020 19:39	
Toluene	<0.00198	0.0992	0.0944	95	0.0950	96	70-130	1	35	mg/kg	06.30.2020 19:39	
Ethylbenzene	<0.00198	0.0992	0.0943	95	0.0949	96	70-130	1	35	mg/kg	06.30.2020 19:39	
m,p-Xylenes	<0.00397	0.198	0.185	93	0.186	94	70-130	1	35	mg/kg	06.30.2020 19:39	
o-Xylene	<0.00198	0.0992	0.0941	95	0.0955	96	70-130	1	35	mg/kg	06.30.2020 19:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		101		70-130	%	06.30.2020 19:39
4-Bromofluorobenzene	110		115		70-130	%	06.30.2020 19:39

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech, Inc.

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

665852

Client Name:	Concho	**Site Manager:**	Mike Carmona
Project Name:	Windward Federal #002H (7.10.19)		
Project Location: (county, state)	Lea County, New Mexico	**Project #:**	212C-MD-01961
Invoice to:	Ike Tavarez		
Receiving Laboratory:	Xenco	**Sampler Signature:**	Devin Dominguez
Comments:			

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	HNO_3	ICE	None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	TPH 8015R	Hold
	Bottomhole-1 comp 2'	6/25/2020			X			X		1	N	X		X												X					
	NSW-1 comp 2'	6/25/2020			X			X		1	N	X		X												X					
	WSW-1 comp 2'	6/25/2020			X			X		1	N	X		X												X					
	SSW-1 comp 2'	6/25/2020			X			X		1	N	X		X												X					
	ESW-1 comp 2'	6/25/2020			X			X		1	N	X		X												X					
	Bottomhole-2 comp 4.5'	6/25/2020			X			X		1	N	X		X												X					
	NSW-2 comp 4.5'	6/25/2020			X			X		1	N	X		X												X					
	WSW-2 comp 4.5'	6/25/2020			X			X		1	N	X		X												X					
	SSW-2 comp 4.5'	6/25/2020			X			X		1	N	X		X												X					
	ESW-2 comp 4.5'	6/25/2020			X			X		1	N	X		X												X					

Relinquished by: [signature]	Date: 6/29	Time: 1450	Received by: [signature]	Date: 6/29	Time: 1450
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature: 4.6/4.2 -0.3 [initials]

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: ______

ORIGINAL COPY

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 06.29.2020 02.50.00 PM

Work Order #: 665852

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	BTEX was in bulk container
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**N/A**	
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 06.29.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06.29.2020
Jessica Kramer