SITE INFORMATION NDHR1922041664

Report Type: Revised - Closure Report 1RP-5632

General Site Information:						
Site:	**Fascinator Fed Com #703H**					
Company:	**COG Operating LLC**					
Section, Township and Range	**Unit L**	**Sec. 29**	**T 24S**	**R 35E**		
Lease Number:	**API No.**					
County:	**Lea County**					
GPS:	**32.18807**			**-103.39778**		
Surface Owner:	**Private**					
Directions:	From intersection of HWY 18 and HWY 28 in Jal, travel west on HWY 128for approximately 13.4 miles, turn north onto lease road for 0.45 mile to the location on the west side of the lease road.					

Release Data:	
Date Released:	7/11/2019
Type Release:	Recycled Produced Water
Source of Contamination:	Layflat Line
Fluid Released:	66 bbls
Fluids Recovered:	60 bbls

Official Communication:			
Name:	Ike Tavarez		Clair Gonzales
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		Clair.Gonzales@tetratech.com

Site Characterization	
Depth to Groundwater:	*139' 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*	*1,000 mg/kg*	*2,500 mg/kg*	*20,000 mg/kg*

TETRA TECH

NDHR1922041664

January 10, 2020

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

Re: Revised - Closure Report for the COG Operating, LLC, Fascinator Fed Com #703H, Unit L, Section 29, Township 24 South, Range 35 East, Lea County, New Mexico.
1RP-5632

To Whom It May Concern:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG) to remediate a release that occurred at the Fascinator Fed Com #703H, Unit L, Section 29, Township 24 South, Range 35 East, Lea County, New Mexico (Site). The spill site coordinates are 32.18807°, -103.39778°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report the release was discovered on July 11, 2019. Approximately 66 barrels of recycled produced water were released due to a third party's 12" lay flat line developing a hole. A vacuum truck was dispatched to remove all freestanding fluids, recovering approximately 60 barrels. The release impacted an area in the pasture adjacent to the lease road measuring approximately 25' x 75'. The initial C-141 Form is included in Appendix A.

Site Characterization

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 floodplains are located within the specified distances. The site is in a low karst potential area. The nearest well is listed on the USGS National Water Information System in Section 30, approximately 1.0 miles southwest of the site and has a reported depth to groundwater of 139 feet below surface. The groundwater data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with 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. 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 upon the site characterization, the proposed RRAL

for TPH is 1,000 mg/kg (GRO + DRO) and 2,500 mg/kg (GRO + DRO + MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 20,000 mg/kg.

Remediation Activities

Tetra Tech personnel were onsite from September 3-6, 2019 to supervise the remediation activities. The release area was excavated to total depths between 2.0' to 6.0' below surface. Nine (9) bottom hole composite samples (Bottom Hole 1 through Bottom Hole 9) and six (6) sidewall composite samples (NSW-1, NSW-2, SSW-1, SSW-2, ESW-1, and WSW-1) were collected every 200 square feet to ensure proper removal of the impacted soils.

Additionally, two auger holes (AH-1 and AH-2) were installed along the lease road and cattle guard to total depths ranging from 3'-3.5' and 5'-5.5' below surface. Selected samples were submitted to the laboratory to be analyzed for TPH method 8015 extended, BTEX method 8021B, and Chloride by method SM4500. The sampling results are summarized in Table 1. The excavation depths and sample locations are shown in Figure 4.

The area of AH-1 showed a chloride high of 1,180 mg/kg at 1'-1.5' which then declined with depth to 16.0 mg/kg at 2'-2.5' below surface. The area of AH-2 showed a chloride high of 656 mg/kg at 2'-2.5' which also declined with depth to 32.0 mg/kg at 3'-3.5' below surface. The area of AH-2 was not excavated due to safety concerns with the high traffic in the area.

Referring to Table 1, all final confirmation samples showed benzene, total BTEX, TPH, and chloride concentrations below the RRAL's and below the reclamation standards.

Approximately 280 cubic yards of material were excavated and transported offsite for proper disposal. The area was then backfilled with clean material to surface grade.

Re-Evaluation/Sampling Results

On November 26, 2020, the NMOCD denied the Closure Report dated October 8, 2019. The NMOCD requested the area of AH-2 in the lease road be excavated due to the chlorides being greater than 600 mg/kg. According to the NMOCD, the lease roads are not exempt for deferment.

Due to the recent heavy rain events in the area, Tetra Tech personnel returned to the site on December 12, 2019 to re-sample the areas of AH-1 and AH-2. The samples were submitted to the laboratory to be analyzed for chloride by method 300.0. The sampling results are summarized in Table 1. The sample locations are shown on Figure 3.

Referring to Table 1, the samples from AH-1 and AH-2 did not show any chlorides concentrations greater than 600 mg/kg. The area of AH-1 showed chloride concentrations of 424 mg/kg (0-1'), 66.8 mg/kg (1-1.5'), 28.7 mg/kg (2-2.5'), 9.28 mg/kg (3-3.5'), 40.5 mg/kg (4-4.5'), and 33.3 mg/kg (5-5.5'). In addition, the area of AH-2 showed chloride concentrations of 365 mg/kg (0-1'),157 mg/kg (1-1.5'), 150 mg/kg (2-2.5'), and 160 mg/kg (3-3.5').

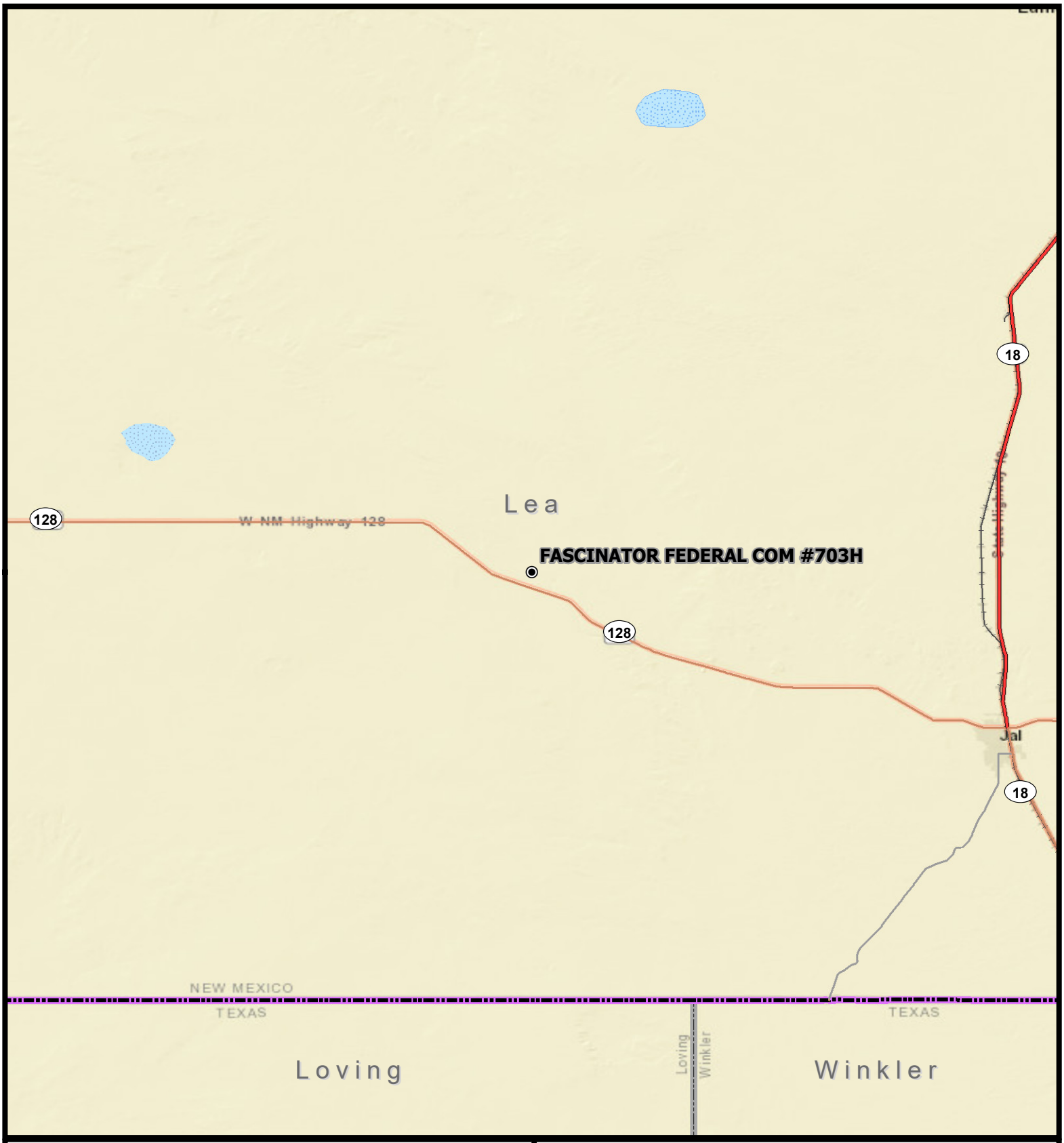
Conclusion

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

Respectfully submitted,
TETRA TECH

Clair Gonzales, P.G.,
Project Manager

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

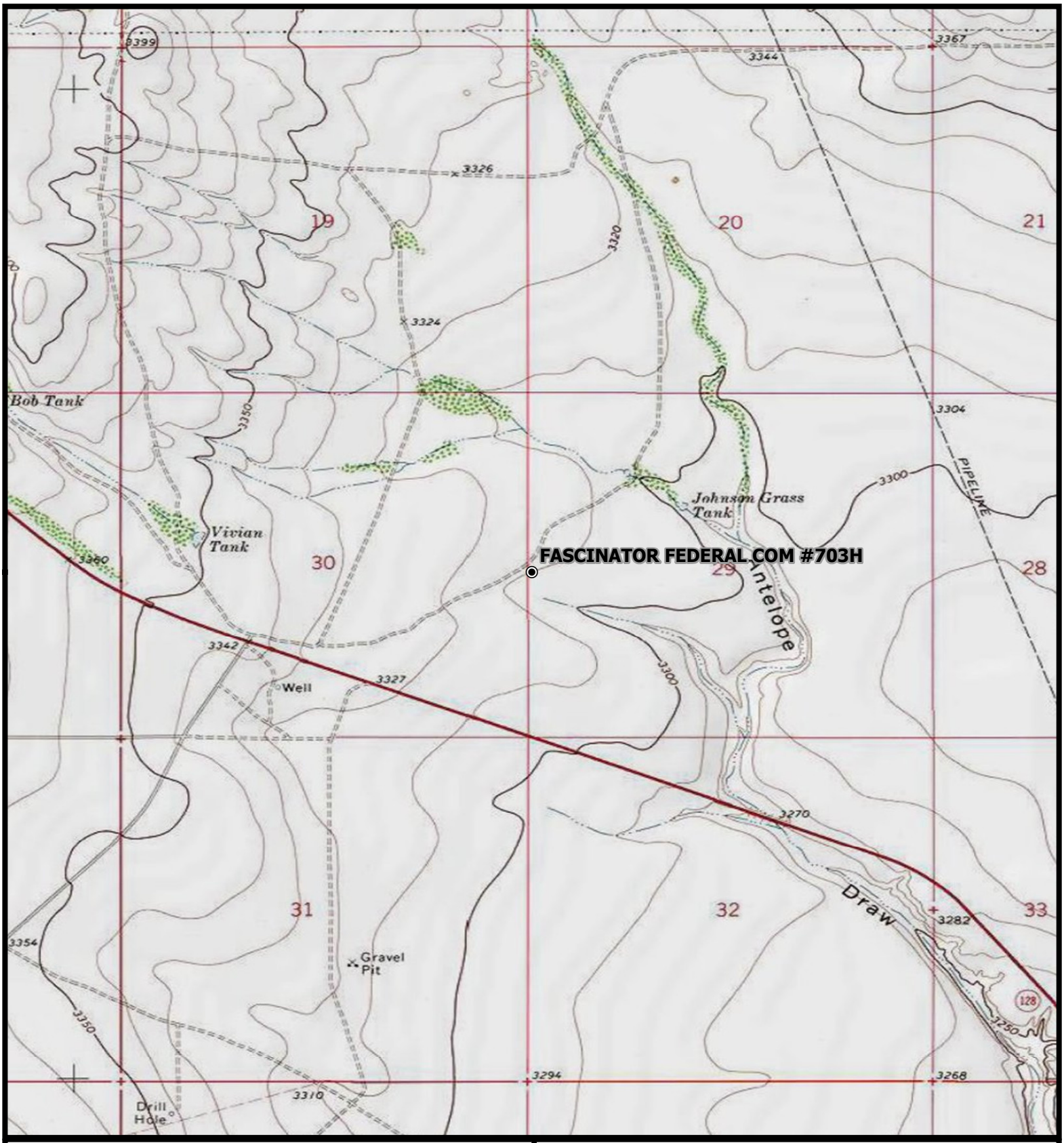
OVERVIEW MAP
FASCINATOR FEDERAL COM #703H SPILL 2
Property Located at coordinates 32.18807°,-103.339778°
LEA COUNTY, NEW MEXICO

CONCHO

Project #:
212C-MD-01892

FIGURE
1

Document Path: C:\Users\MISTI.MORGAN\Desktop\project folder\212C-MD-01892 FASCINATOR FEDERAL COM #703H SPILL #2\MXD\212C-MD-01892 FASCINATOR FEDERAL COM #703H SPILL 2 FIG. 1.mxd



SITE LOCATION

N
W E
S

0 1,000 2,000

Approximate Scale in Feet

TOPOGRAPHIC MAP
FASCINATOR FEDERAL COM #703H SPILL 2
Property Located at coordinates 32.18807°,-103.339778°
LEA COUNTY, NEW MEXICO

CONCHO

Project #:
212C-MD-01892

FIGURE
2

Document Path: C:\Users\MISTI.MORGAN\Desktop\project folder\212C-MD-01892 FASCINATOR FEDERAL COM #703H SPILL #2\MXD\212C-MD-01892 FASCINATOR FEDERAL COM #703H SPILL 2 FIG.2.mxd

AUGER HOLE DESIGNATION	LATITUDE	LONGITUDE
AH-1	32.188441°	-103.398234°
AH-2	32.188455°	-103.398196°

AUGERHOLE SAMPLE POINT LOCATIONS
FENCELINE
FLOWLINE
AFFECTED SPILL AREA

N
W
E
S

0 30 60
Approximate Scale in Feet

Source: "New Mexico". 32°11'17.05"N, 103°23'52.01"W. **Google Earth**. November 2017. September 13, 2019.

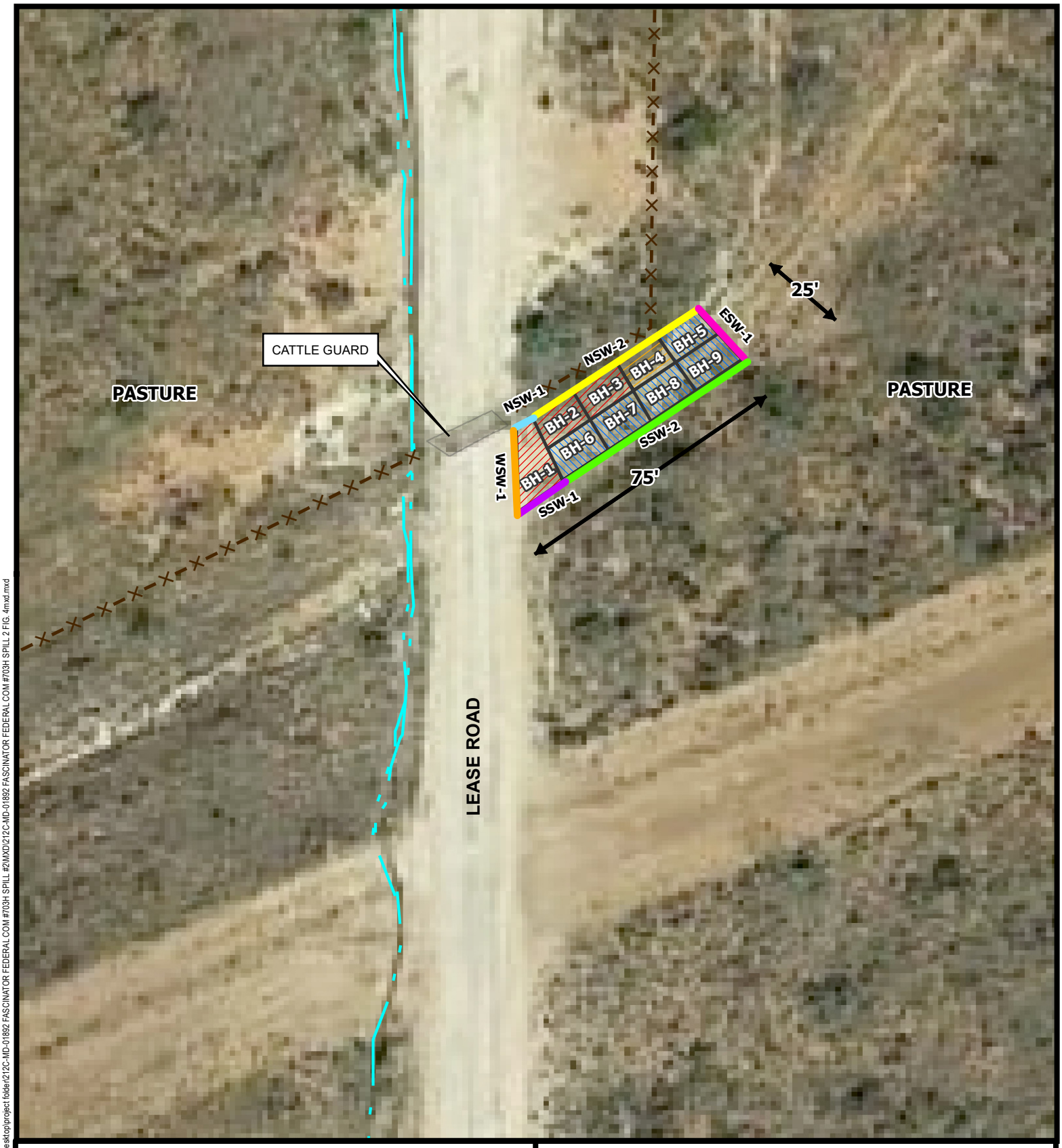
EXCAVATION AREA & DEPTH MAP
FASCINATOR FEDERAL COM #703H SPILL 2
Property Located at coordinates 32.18807°,-103.339778°
LEA COUNTY, MEXICO

CONCHO

Project #:
212C-MD-01892

FIGURE
3

Date: 10/1/2019 Document Path: C:\Users\MISTI.MORGAN\Desktop\project folder\212C-MD-01892 FASCINATOR FEDERAL COM #703H SPILL #2\MXD\212C-MD-01892 FASCINATOR FEDERAL COM #703H SPILL 2 FIG. 3.mxd



BH BOTTOM HOLE

SIDEWALL SAMPLE DESIGNATIONS

FENCELINE

FLOWLINE

2.0' EXCAVATED DEPTH AREA

4.0' EXCAVATED DEPTH AREA

6.0' EXCAVATED DEPTH AREA

Source: "New Mexico". 32°11'17.057"N, 103°23'52.01"W. **Google Earth**. November 2017. September 13, 2019.

N

W E

S

0 20 40

Approximate Scale in Feet

EXCAVATION AREA & DEPTH MAP
FASCINATOR FEDERAL COM #703H SPILL 2
Property Located at coordinates 32.18807°,-103.339778°
LEA COUNTY, NEW MEXICO

CONCHO

Project #:
212C-MD-01892

FIGURE
4

Date: 9/19/2019 Document Path: C:\Users\MISTI.MORGAN\Desktop\project folder\212C-MD-01892 FASCINATOR FEDERAL COM #703H SPILL #2\MXD\212C-MD-01892 FASCINATOR FEDERAL COM #703H SPILL 2 FIG. 4mxd.mxd

Tables

Table 1
COG
Fascinator Fed Com #703 Spill #2 (07.11.19)
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample 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	ORO	Total						
AH-1	9/3/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	128
	"	1-1.5	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,180
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	16.0
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	16.0
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	16.0
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	-	32.0
AH-1	12/12/2019	0-1	-	X		-	-	-	-	-	-	-	-	-	424
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	-	66.8
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	28.7
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	9.28
	"	4-4.5	-	X		-	-	-	-	-	-	-	-	-	40.5
	"	5-5.5	-	X		-	-	-	-	-	-	-	-	-	33.3
AH-2	9/5/2019	0-1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	336
	"	1-1.5	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	400
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	656
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	32.0
AH-2	12/12/2019	0-1	-	X		-	-	-	-	-	-	-	-	-	365
	"	1-1.5	-	X		-	-	-	-	-	-	-	-	-	157
	"	2-2.5	-	X		-	-	-	-	-	-	-	-	-	150
	"	3-3.5	-	X		-	-	-	-	-	-	-	-	-	160
Bottom Hole 1	9/5/2019		4.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
Bottom Hole 2	9/5/2019		4.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
Bottom Hole 3	9/5/2019		4.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
Bottom Hole 4	9/5/2019		6.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
Bottom Hole 5	9/5/2019		2.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
Bottom Hole 6	9/5/2019		2.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
Bottom Hole 7	9/5/2019		2.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**2,680**
Bottom Hole 8	9/5/2019		2.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
Bottom Hole 9	9/5/2019		2.0	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
NSW-1	9/5/2019		-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	112
NSW-2	9/5/2019		-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
SSW-1	9/5/2019		-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
SSW-2	9/5/2019		-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
ESW-1	9/5/2019		-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0
WSW-1	9/5/2019		-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0

Photos

Concho Fascinator Federal Com #703H #2

Lea County, New Mexico

View East – Excavation Area

View West – Excavation Area

Concho Fascinator Federal Com #703H #2

Lea County, New Mexico

View North – Excavation Area

View South – Excavation Area

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	NDHR1922041664
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Jennifer Knowlton	Contact Telephone	(575) 748-1570
Contact email	JKnowlton@concho.com	Incident # *(assigned by OCD)*	
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.18807 Longitude -103.39778
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Fascinator Federal Com #703H	Site Type	Lay Flat Line
Date Release Discovered	July 11, 2019	API# *(if applicable)*	

Unit Letter	Section	Township	Range	County
L	29	24S	35E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ■ Private (*Name:* Quail Ranch LLC)

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) 66	Volume Recovered (bbls) 60
	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

The release of recycled produced water was caused by a third party when their 12" lay flat hose got a hole due to rubbing against a cattle guard. The lay flat hose is being repaired. The release was in the pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will evaluate the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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? The volume released was greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Immediate notice was given by DeAnn Grant via e-mail July 11, 2019 at 3:09 pm to Dylan Rose-Coss and Jim Amos.

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: DeAnn Grant Title: HSE Administrative Assistant

Signature: DeAnn Grant Date: 7/16/2019

email: agrant@concho.com Telephone: (432) 253-4513

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?	139 (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.

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: _____

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: Ike Tavarez Title: Senior HSE Supervisor

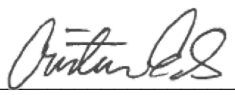
Signature: Date: 1/20/20

email: itavarez@concho.com Telephone: 432-685-7443

OCD Only

Received by: Cristina Eads Date: 02/27/2020

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: 02/27/2020

Printed Name: Cristina Eads Title: Environmental Specialist

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Fascinator Fed Com #703H
Lea County, New Mexico

23 South 34 East

6 329	5	4	3	2	1 137
7	8 255	9	10	11	12
18	17	16 345	15	14	13
19	20	21	22 282 295	23 233 265	24
30	29	28	27	26	25
31	32 160 130	33	34	35	36

23 South 35 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	33	34	35	36

23 South 36 East

6	5	4 160	3	2	1
7	8	9	10	11	12
18	17	16 220	15 149	14	13
19	20	21	22 400	23 143	24
30	29	28	27	26	25
31 189	32	33	34	35	36 127

24 South 34 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	33	34	35	36

24 South 35 East

6	5	4	3	2	1
7	8	9	10 300	11	12
18	17	16	15	14	13
19	20 97	21	22	23	24
30 139	29	28	27	26	25
31	32	33	34	35	36

24 South 36 East

6	5	4 165	3	2	1
7	8	9	10	11	12
18	17	16	15 312	14	13
19	20	21	22	23 160	24
30	29	28	27	26	25
31	32	33 54 53	34	35	36

25 South 34 East

6	5	4	3	2	1 260
7	8	9	10	11	12
18	17	16	15 135	14	13
19	20	21	22	23	24 300
30	29 50	28	27	26	25
31	32	33	34	35	36

25 South 35 East

6	5 165	4	3 108	2	1
7	8	9	10	11	12
18 230	17	16	15	14	13
19	20	21 218	22	23	24
30 80	29	28	27	26	25
31	32	33	34	35	36

25 South 36 East

6 295	5	4	3	2	1
7	8	9	10 300 180	11	12
18	17	16	15 120	14	13
19	20	21	22	23 53.7	24 455
30	29	28	27	26	25
31	32	33 80	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

USC
Con
Sea

National Water Information System: Mapper

Sites | Map

Search

Search by Street Address:
32.18334 -103.39826

Search by Place Name:
Enter Place Name

Search by Site Number(s):
Enter Site Number(s)

Search by State/Territory:
Select an Area

Search by Watershed Region:
Select a Region

Surface-Water Sites

Groundwater Sites

Springs

Atmospheric Sites

Other Sites

Site Information

National Water Information System: Web Interface

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 321039103243402

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

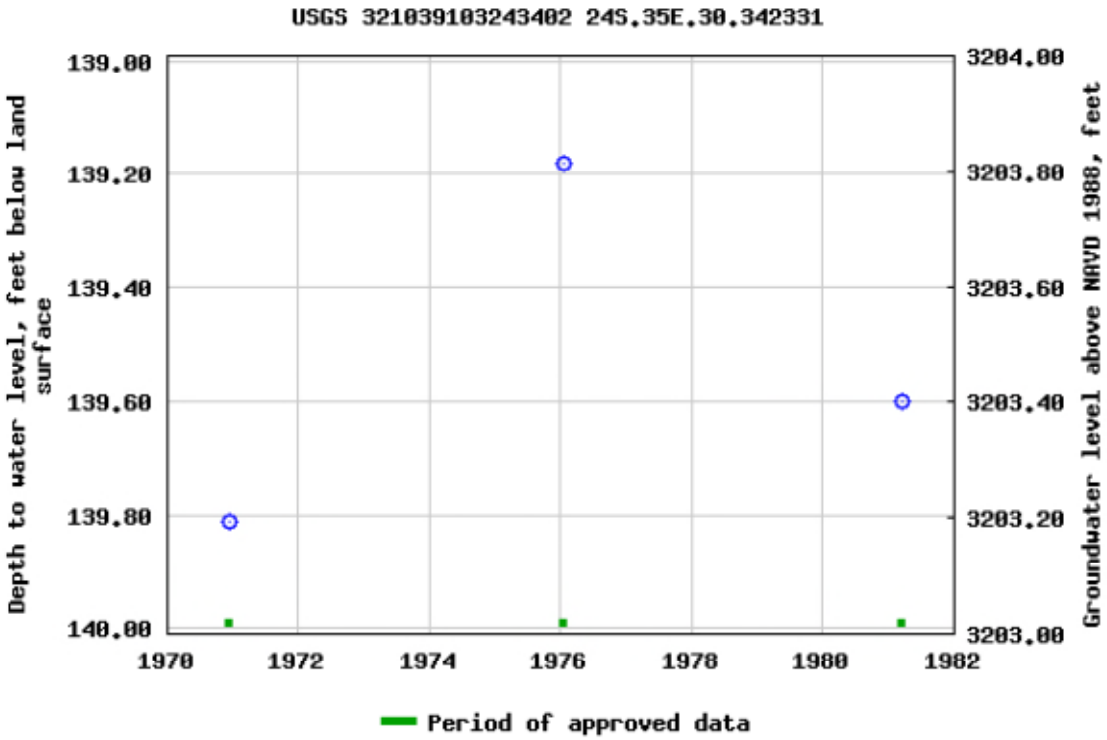
USGS 321039103243402 24S.35E.30.342331

Available data for this site Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°10'39", Longitude 103°24'34" NAD27
Land-surface elevation 3,343 feet above NAVD88
The depth of the well is 176 feet below land surface.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility Plug-Ins FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2019-08-19 12:38:58 EDT
1.11 0.91 nadww01

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

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00366 POD1	CP	LE	4	1	1	10	24S	35E	654447	3567834*	1250		
CP 00573	CP	LE	1	4	1	10	24S	35E	654657	3567638*	405	300	105
CP 00839 POD1	CP	LE		4	3	30	24S	35E	650017	3561833*	175		
CP 00842 POD1	CP	LE		2	4	24	24S	35E	658834	3563982*	130		
CP 00845 POD1	CP	LE		1	3	10	24S	35E	654360	3567130*	190		
CP 01056 POD1	CP	LE	4	4	3	02	24S	35E	656465	3568304	5396	4399	997
CP 01057 POD1	CP	LE	4	2	3	02	24S	35E	656464	3568762	5390	4365	1025
CP 01119 POD2	CP	LE			4	23	24S	35E	657210	3564007	1572		
CP 01513 POD1	CP	LE	3	3	1	10	24S	35E	654184	3567350	186		
P 04623 POD4	P	RO	2	2	4	14	24S	35E	653797	3787492	250		

Average Depth to Water: **3021 feet**

Minimum Depth: **300 feet**

Maximum Depth: **4399 feet**

Record Count: 10

PLSS Search:

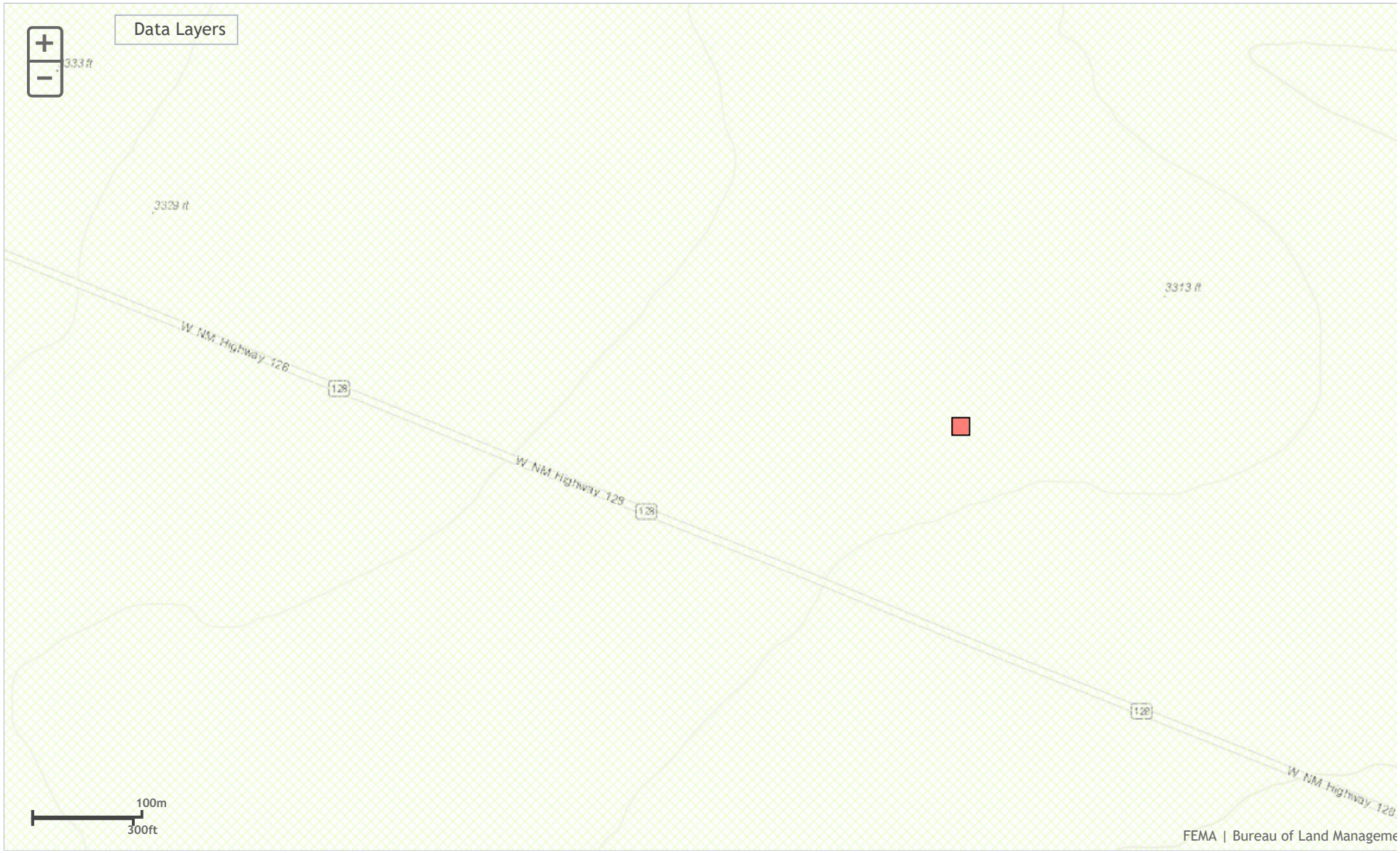
Township: 24S **Range:** 35E

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

COG Fascinator Fed Com #3H

Karst Potential Map

NFHL Web Mapping Application



Appendix C

CARDINAL Laboratories

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

September 04, 2019

MIKE CARMONA

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: FASCINATOR FED COM #703H

Enclosed are the results of analyses for samples received by the laboratory on 09/03/19 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/03/2019	Sampling Date:	09/03/2019
Reported:	09/04/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: AH - 1 0-1' (H903032-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/04/2019	ND	2.07	104	2.00	9.14	
Toluene*	<0.050	0.050	09/04/2019	ND	2.07	104	2.00	7.57	
Ethylbenzene*	<0.050	0.050	09/04/2019	ND	2.09	105	2.00	8.65	
Total Xylenes*	<0.150	0.150	09/04/2019	ND	6.26	104	6.00	8.31	
Total BTEX	<0.300	0.300	09/04/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *85.6 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	09/04/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/04/2019	ND	203	101	200	2.19	
DRO >C10-C28*	<10.0	10.0	09/04/2019	ND	211	105	200	3.43	
EXT DRO >C28-C36	<10.0	10.0	09/04/2019	ND					

Surrogate: 1-Chlorooctane *72.9 %* *41-142*

Surrogate: 1-Chlorooctadecane *76.5 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/03/2019	Sampling Date:	09/03/2019
Reported:	09/04/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: AH - 1 1'-1.5' (H903032-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/04/2019	ND	2.07	104	2.00	9.14	
Toluene*	<0.050	0.050	09/04/2019	ND	2.07	104	2.00	7.57	
Ethylbenzene*	<0.050	0.050	09/04/2019	ND	2.09	105	2.00	8.65	
Total Xylenes*	<0.150	0.150	09/04/2019	ND	6.26	104	6.00	8.31	
Total BTEX	<0.300	0.300	09/04/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *86.6 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1180**	16.0	09/04/2019	ND	432	108	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/04/2019	ND	203	101	200	2.19	
DRO >C10-C28*	<10.0	10.0	09/04/2019	ND	211	105	200	3.43	
EXT DRO >C28-C36	<10.0	10.0	09/04/2019	ND					

Surrogate: 1-Chlorooctane *75.4 %* *41-142*

Surrogate: 1-Chlorooctadecane *78.2 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/03/2019	Sampling Date:	09/03/2019
Reported:	09/04/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/2019)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: AH - 1 2'-2.5' (H903032-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/04/2019	ND	432	108	400	3.77	

Sample ID: AH - 1 3'-3.5' (H903032-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/04/2019	ND	432	108	400	3.77	

Sample ID: AH - 1 4'-4.5' (H903032-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/04/2019	ND	432	108	400	3.77	

Sample ID: AH - 1 5'-5.5' (H903032-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/04/2019	ND	432	108	400	3.77	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Tetra Tech	**BILL TO**	
Project Manager:	Mike Carmona	P.O. #:	
Address:	901 W Wall	Company:	Concho
City:	Midland State: TX Zip: 79701	Attn:	Ike Tavarez
Phone #:	432-664-8185 Fax #:	Address:	600 W Illinois
Project #:	Project Owner:	City:	Midland
Project Name:	Fascinator Fed Com #703H #7	State: TX Zip:	79701
Project Location:	Lea CO, NM 7/11/2019	Phone #:	432-701-8630
Sampler Name:	Devin Dominguez	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH	BTEX	Chlorides
H903032																	
1	AH-1 0-1'	C	1			X					X		9/3/19		X	X	X
2	AH-1 1'-1.5'	C	1			X					X				X	X	X
3	AH-1 2'-2.5'	C	1			X					X				X	X	X
4	AH-1 3'-3.5'	C	1			X					X				X	X	X
5	AH-1 4'-4.5'	C	1			X					X				X	X	X
6	AH-1 5'-5.5'	C	1			X					X		▽		X	X	X

Relinquished By:	Date: 9/3	Received By:	Tamara Oldaker
	Time: 15:55		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One) 3.9° #97
Sampler - UPS - Bus - Other: Corrected 4.3°

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

CHECKED BY: (Initials) T.O.

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

Rush!!

CARDINAL Laboratories

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

September 06, 2019

MIKE CARMONA

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: FASCINATOR FED COM #703H

Enclosed are the results of analyses for samples received by the laboratory on 09/05/19 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/05/2019	Sampling Date:	09/05/2019
Reported:	09/06/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: AH - 2 0-1' (H903073-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/05/2019	ND	2.03	102	2.00	1.92	
Toluene*	<0.050	0.050	09/05/2019	ND	2.06	103	2.00	3.54	
Ethylbenzene*	<0.050	0.050	09/05/2019	ND	2.08	104	2.00	2.30	
Total Xylenes*	<0.150	0.150	09/05/2019	ND	6.35	106	6.00	1.85	
Total BTEX	<0.300	0.300	09/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *86.1 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	09/06/2019	ND	448	112	400	3.64	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/05/2019	ND	198	99.0	200	1.22	
DRO >C10-C28*	<10.0	10.0	09/05/2019	ND	204	102	200	3.97	
EXT DRO >C28-C36	<10.0	10.0	09/05/2019	ND					

Surrogate: 1-Chlorooctane *76.7 %* *41-142*

Surrogate: 1-Chlorooctadecane *81.1 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/05/2019	Sampling Date:	09/05/2019
Reported:	09/06/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: AH - 2 1'-1.5' (H903073-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/05/2019	ND	2.03	102	2.00	1.92	
Toluene*	<0.050	0.050	09/05/2019	ND	2.06	103	2.00	3.54	
Ethylbenzene*	<0.050	0.050	09/05/2019	ND	2.08	104	2.00	2.30	
Total Xylenes*	<0.150	0.150	09/05/2019	ND	6.35	106	6.00	1.85	
Total BTEX	<0.300	0.300	09/05/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *88.5 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	09/06/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/05/2019	ND	198	99.0	200	1.22	
DRO >C10-C28*	<10.0	10.0	09/05/2019	ND	204	102	200	3.97	
EXT DRO >C28-C36	<10.0	10.0	09/05/2019	ND					

Surrogate: 1-Chlorooctane *88.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *91.9 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/05/2019	Sampling Date:	09/05/2019
Reported:	09/06/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: AH - 2 2'-2.5' (H903073-03)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**656**	16.0	09/06/2019	ND	416	104	400	0.00	

Sample ID: AH - 2 3'-3.5' (H903073-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/06/2019	ND	416	104	400	0.00	

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Notes and Definitions

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

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: TetraTech	**BILL TO**
Project Manager: Mike Carmona	P.O. #:
Address: 901 W Wall	Company: Concho
City: Midland State: TX Zip: 79701	Attn: Ike Tavarez
Phone #: 432-664-8185 Fax #: —	Address: 600 W Illinois
Project #: — Project Owner: —	City: Midland
Project Name: Fascinator Fed Com 703H #2 7/11/2019	State: TX Zip: 79701
Project Location: Lea Co, NM	Phone #: 432-701-8630
Sampler Name: Devin Dominguez	Fax #: —

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH	BTEX	Chlorides
H903073																	
1	AH-2 0-1'	G	1			X					X		9/5/19		X	X	X
2	AH-2 1'-1.5'	G	1			X					X		↓		X	X	X
3	AH-2 2'-2.5'	G	1			X					X						X
4	AH-2 3'-3.5'	G	1			X					X		↓				X

Relinquished By:	Date: 9/5	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 15:55	Tamara Oldaker	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Rush!!
	Time:		
Delivered By: (Circle One) 1.7° #198	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) T.O.	
Sampler - UPS - Bus - Other: Corrected 2.1°			

CARDINAL Laboratories

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

September 10, 2019

MIKE CARMONA

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: FASCINATOR FED COM #703H

Enclosed are the results of analyses for samples received by the laboratory on 09/05/19 15:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

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

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

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

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BOTTOM HOLE - 4 COMP 6'	H903074-01	Soil	05-Sep-19 00:00	05-Sep-19 15:55
BOTTOM HOLE - 5 COMP 2'	H903074-02	Soil	05-Sep-19 00:00	05-Sep-19 15:55
BOTTOM HOLE - 6 COMP 2'	H903074-03	Soil	05-Sep-19 00:00	05-Sep-19 15:55
BOTTOM HOLE - 7 COMP 2'	H903074-04	Soil	05-Sep-19 00:00	05-Sep-19 15:55
BOTTOM HOLE - 8 COMP 2'	H903074-05	Soil	05-Sep-19 00:00	05-Sep-19 15:55
BOTTOM HOLE - 9 COMP 2'	H903074-06	Soil	05-Sep-19 00:00	05-Sep-19 15:55
ESW - 1 COMP 2'	H903074-07	Soil	05-Sep-19 00:00	05-Sep-19 15:55

09/09/19 - Client requested rerun of chloride on sample -04.
09/10/19 - Discovered that sample -04 was switched with another sample -04 when lined up for chloride analysis and analyst didn't catch it. Sample was rerun for choride and new value replaced the previously reported value. This is the revised report and will replace the one sent on 09/06/19.

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

BOTTOM HOLE - 4 COMP 6'

H903074-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	9090606	AC	06-Sep-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*87.1 %*	*73.3-129*		*9090509*	BF	*05-Sep-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
Surrogate: 1-Chlorooctane			*86.3 %*	*41-142*		*9090508*	MS	*05-Sep-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*94.3 %*	*37.6-147*		*9090508*	MS	*05-Sep-19*	*8015B*	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

BOTTOM HOLE - 5 COMP 2'

H903074-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	9090606	AC	06-Sep-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*85.5 %*	*73.3-129*		*9090509*	BF	*05-Sep-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
Surrogate: 1-Chlorooctane			*86.0 %*	*41-142*		*9090508*	MS	*05-Sep-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*90.8 %*	*37.6-147*		*9090508*	MS	*05-Sep-19*	*8015B*	

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CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

BOTTOM HOLE - 6 COMP 2'

H903074-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	9090606	AC	06-Sep-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*87.0 %*	*73.3-129*		*9090509*	BF	*06-Sep-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9090508	MS	06-Sep-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9090508	MS	06-Sep-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9090508	MS	06-Sep-19	8015B	
Surrogate: 1-Chlorooctane			*82.8 %*	*41-142*		*9090508*	MS	*06-Sep-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*87.2 %*	*37.6-147*		*9090508*	MS	*06-Sep-19*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

BOTTOM HOLE - 7 COMP 2'

H903074-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**16.0**		16.0	mg/kg	4	9090606	AC	06-Sep-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9090509	BF	06-Sep-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*87.2 %*	*73.3-129*		*9090509*	BF	*06-Sep-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9090508	MS	06-Sep-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9090508	MS	06-Sep-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9090508	MS	06-Sep-19	8015B	
Surrogate: 1-Chlorooctane			*85.1 %*	*41-142*		*9090508*	MS	*06-Sep-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*90.2 %*	*37.6-147*		*9090508*	MS	*06-Sep-19*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

BOTTOM HOLE - 8 COMP 2'

H903074-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	9090607	AC	06-Sep-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*86.4 %*	*73.3-129*		*9090509*	BF	*05-Sep-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
Surrogate: 1-Chlorooctane			*75.5 %*	*41-142*		*9090508*	MS	*05-Sep-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*78.2 %*	*37.6-147*		*9090508*	MS	*05-Sep-19*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

BOTTOM HOLE - 9 COMP 2'

H903074-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	9090607	AC	06-Sep-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*87.3 %*	*73.3-129*		*9090509*	BF	*05-Sep-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
Surrogate: 1-Chlorooctane			*78.9 %*	*41-142*		*9090508*	MS	*05-Sep-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*81.2 %*	*37.6-147*		*9090508*	MS	*05-Sep-19*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

ESW - 1 COMP 2'

H903074-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	9090607	AC	06-Sep-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9090509	BF	05-Sep-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*86.7 %*	*73.3-129*		*9090509*	BF	*05-Sep-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9090508	MS	05-Sep-19	8015B	
Surrogate: 1-Chlorooctane			*76.9 %*	*41-142*		*9090508*	MS	*05-Sep-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*79.4 %*	*37.6-147*		*9090508*	MS	*05-Sep-19*	*8015B*	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9090606 - 1:4 DI Water										
Blank (9090606-BLK1)				Prepared & Analyzed: 06-Sep-19						
Chloride	ND	16.0	mg/kg							
LCS (9090606-BS1)				Prepared & Analyzed: 06-Sep-19						
Chloride	448	16.0	mg/kg	400		112	80-120			
LCS Dup (9090606-BSD1)				Prepared & Analyzed: 06-Sep-19						
Chloride	432	16.0	mg/kg	400		108	80-120	3.64	20	
Batch 9090607 - 1:4 DI Water										
Blank (9090607-BLK1)				Prepared & Analyzed: 06-Sep-19						
Chloride	ND	16.0	mg/kg							
LCS (9090607-BS1)				Prepared & Analyzed: 06-Sep-19						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (9090607-BSD1)				Prepared & Analyzed: 06-Sep-19						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9090509 - SW846-5035										
Blank (9090509-BLK1)				Prepared & Analyzed: 05-Sep-19						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0895*		mg/kg	*0.100*		*89.5*	*73.3-129*			
LCS (9090509-BS1)				Prepared & Analyzed: 05-Sep-19						
Benzene	2.03	0.050	mg/kg	2.00		102	72.2-131			
Toluene	2.06	0.050	mg/kg	2.00		103	71.7-126			
Ethylbenzene	2.08	0.050	mg/kg	2.00		104	68.9-126			
Total Xylenes	6.35	0.150	mg/kg	6.00		106	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0855*		mg/kg	*0.100*		*85.5*	*73.3-129*			
LCS Dup (9090509-BSD1)				Prepared & Analyzed: 05-Sep-19						
Benzene	1.99	0.050	mg/kg	2.00		99.7	72.2-131	1.92	6.91	
Toluene	1.99	0.050	mg/kg	2.00		99.3	71.7-126	3.54	7.12	
Ethylbenzene	2.03	0.050	mg/kg	2.00		102	68.9-126	2.30	7.88	
Total Xylenes	6.23	0.150	mg/kg	6.00		104	71.4-125	1.85	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0898*		mg/kg	*0.100*		*89.8*	*73.3-129*			

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: FASCINATOR FED COM #703H Project Number: #2 (7/11/19) Project Manager: MIKE CARMONA Fax To: (432) 682-3946	Reported: 10-Sep-19 11:25

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9090508 - General Prep - Organics										
Blank (9090508-BLK1)				Prepared & Analyzed: 05-Sep-19						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.0*		mg/kg	*50.0*		*82.0*	*41-142*			
Surrogate: 1-Chlorooctadecane	*42.3*		mg/kg	*50.0*		*84.7*	*37.6-147*			
LCS (9090508-BS1)				Prepared & Analyzed: 05-Sep-19						
GRO C6-C10	198	10.0	mg/kg	200		99.0	76.5-133			
DRO >C10-C28	204	10.0	mg/kg	200		102	72.9-138			
Total TPH C6-C28	402	10.0	mg/kg	400		100	78-132			
Surrogate: 1-Chlorooctane	*44.8*		mg/kg	*50.0*		*89.6*	*41-142*			
Surrogate: 1-Chlorooctadecane	*45.0*		mg/kg	*50.0*		*89.9*	*37.6-147*			
LCS Dup (9090508-BSD1)				Prepared & Analyzed: 05-Sep-19						
GRO C6-C10	200	10.0	mg/kg	200		100	76.5-133	1.22	20.6	
DRO >C10-C28	212	10.0	mg/kg	200		106	72.9-138	3.97	20.6	
Total TPH C6-C28	413	10.0	mg/kg	400		103	78-132	2.62	18	
Surrogate: 1-Chlorooctane	*46.0*		mg/kg	*50.0*		*92.1*	*41-142*			
Surrogate: 1-Chlorooctadecane	*46.4*		mg/kg	*50.0*		*92.8*	*37.6-147*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

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

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: TetraTech	**BILL TO**
Project Manager: Mike Carmona	P.O. #:
Address: 901 W Wall	Company: Concho
City: Midland State: TX Zip: 79701	Attn: IKE Tavarez
Phone #: 432-664-8185 Fax #: —	Address: 600 W Illinois
Project #: — Project Owner: —	City: Midland
Project Name: Fascinator Fed Com 703H #2 7/11/2019	State: TX Zip: 79701
Project Location: Lea Co, NM	Phone #: 432-701-8630
Sampler Name: Devin Dominguez	Fax #: —

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH	BTEX	Chlorides
H903074																	
1	Bottomhole-4 Comp 6'	C	1			X					X		9/5/19		X	X	X
2	" -5 Comp 2'	C	1			X					X				X	X	X
3	" -6 Comp 2'	C	1			X					X				X	X	X
4	" -7 Comp 2'	C	1			X					X				X	X	X
5	" -8 Comp 2'	C	1			X					X				X	X	X
6	" -9 Comp 2'	C	1			X					X				X	X	X
7	ESW-1 Comp 2'	C	1			X					X				X	X	X
															X		
															X		
															X		

Relinquished By:	Date: 9/5	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 15:55		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Rush!!
	Time:		
Delivered By: (Circle One) 1.7° #498	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) TO.	
Sampler - UPS - Bus - Other: Corrected 2.1°			

CARDINAL Laboratories

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

September 09, 2019

MIKE CARMONA

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: FASCINATOR FED COM #703H

Enclosed are the results of analyses for samples received by the laboratory on 09/06/19 11:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/09/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: BOTTOM HOLE - 1 COMP 4' (H903085-01)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2019	ND	2.00	100	2.00	8.02	
Toluene*	<0.050	0.050	09/06/2019	ND	1.97	98.7	2.00	4.46	
Ethylbenzene*	<0.050	0.050	09/06/2019	ND	2.04	102	2.00	6.60	
Total Xylenes*	<0.150	0.150	09/06/2019	ND	6.15	103	6.00	7.01	
Total BTEX	<0.300	0.300	09/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *86.5 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/09/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2019	ND	205	103	200	0.162	
DRO >C10-C28*	<10.0	10.0	09/06/2019	ND	212	106	200	1.90	
EXT DRO >C28-C36	<10.0	10.0	09/06/2019	ND					

Surrogate: 1-Chlorooctane *82.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *88.4 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/09/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: BOTTOM HOLE - 2 COMP 4' (H903085-02)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2019	ND	2.00	100	2.00	8.02	
Toluene*	<0.050	0.050	09/06/2019	ND	1.97	98.7	2.00	4.46	
Ethylbenzene*	<0.050	0.050	09/06/2019	ND	2.04	102	2.00	6.60	
Total Xylenes*	<0.150	0.150	09/06/2019	ND	6.15	103	6.00	7.01	
Total BTEX	<0.300	0.300	09/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *88.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/09/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2019	ND	205	103	200	0.162	
DRO >C10-C28*	<10.0	10.0	09/06/2019	ND	212	106	200	1.90	
EXT DRO >C28-C36	<10.0	10.0	09/06/2019	ND					

Surrogate: 1-Chlorooctane *76.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *82.4 %* *37.6-147*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/09/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: BOTTOM HOLE - 3 COMP 4' (H903085-03)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2019	ND	2.00	100	2.00	8.02	
Toluene*	<0.050	0.050	09/06/2019	ND	1.97	98.7	2.00	4.46	
Ethylbenzene*	<0.050	0.050	09/06/2019	ND	2.04	102	2.00	6.60	
Total Xylenes*	<0.150	0.150	09/06/2019	ND	6.15	103	6.00	7.01	
Total BTEX	<0.300	0.300	09/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *89.6 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/09/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2019	ND	205	103	200	0.162	
DRO >C10-C28*	<10.0	10.0	09/06/2019	ND	212	106	200	1.90	
EXT DRO >C28-C36	<10.0	10.0	09/06/2019	ND					

Surrogate: 1-Chlorooctane *79.0 %* *41-142*

Surrogate: 1-Chlorooctadecane *83.9 %* *37.6-147*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/09/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: NSW-1 COMP 4' (H903085-04)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2019	ND	2.00	100	2.00	8.02	
Toluene*	<0.050	0.050	09/06/2019	ND	1.97	98.7	2.00	4.46	
Ethylbenzene*	<0.050	0.050	09/06/2019	ND	2.04	102	2.00	6.60	
Total Xylenes*	<0.150	0.150	09/06/2019	ND	6.15	103	6.00	7.01	
Total BTEX	<0.300	0.300	09/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *87.9 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	09/09/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2019	ND	205	103	200	0.162	
DRO >C10-C28*	<10.0	10.0	09/06/2019	ND	212	106	200	1.90	
EXT DRO >C28-C36	<10.0	10.0	09/06/2019	ND					

Surrogate: 1-Chlorooctane *76.6 %* *41-142*

Surrogate: 1-Chlorooctadecane *82.8 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/09/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: NSW-2 COMP 2' (H903085-05)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2019	ND	2.00	100	2.00	8.02	
Toluene*	<0.050	0.050	09/06/2019	ND	1.97	98.7	2.00	4.46	
Ethylbenzene*	<0.050	0.050	09/06/2019	ND	2.04	102	2.00	6.60	
Total Xylenes*	<0.150	0.150	09/06/2019	ND	6.15	103	6.00	7.01	
Total BTEX	<0.300	0.300	09/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *88.3 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/09/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2019	ND	205	103	200	0.162	
DRO >C10-C28*	<10.0	10.0	09/06/2019	ND	212	106	200	1.90	
EXT DRO >C28-C36	<10.0	10.0	09/06/2019	ND					

Surrogate: 1-Chlorooctane *74.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *79.3 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/09/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: SSW-1 COMP 4' (H903085-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2019	ND	2.00	100	2.00	8.02	
Toluene*	<0.050	0.050	09/06/2019	ND	1.97	98.7	2.00	4.46	
Ethylbenzene*	<0.050	0.050	09/06/2019	ND	2.04	102	2.00	6.60	
Total Xylenes*	<0.150	0.150	09/06/2019	ND	6.15	103	6.00	7.01	
Total BTEX	<0.300	0.300	09/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *90.0 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/09/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2019	ND	205	103	200	0.162	
DRO >C10-C28*	<10.0	10.0	09/06/2019	ND	212	106	200	1.90	
EXT DRO >C28-C36	<10.0	10.0	09/06/2019	ND					

Surrogate: 1-Chlorooctane *68.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *73.6 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/09/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: SSW-2 COMP 2' (H903085-07)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2019	ND	2.00	100	2.00	8.02	
Toluene*	<0.050	0.050	09/06/2019	ND	1.97	98.7	2.00	4.46	
Ethylbenzene*	<0.050	0.050	09/06/2019	ND	2.04	102	2.00	6.60	
Total Xylenes*	<0.150	0.150	09/06/2019	ND	6.15	103	6.00	7.01	
Total BTEX	<0.300	0.300	09/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *86.6 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	09/09/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2019	ND	205	103	200	0.162	
DRO >C10-C28*	<10.0	10.0	09/06/2019	ND	212	106	200	1.90	
EXT DRO >C28-C36	<10.0	10.0	09/06/2019	ND					

Surrogate: 1-Chlorooctane *77.1 %* *41-142*

Surrogate: 1-Chlorooctadecane *80.9 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	09/06/2019	Sampling Date:	09/06/2019
Reported:	09/09/2019	Sampling Type:	Soil
Project Name:	FASCINATOR FED COM #703H	Sampling Condition:	Cool & Intact
Project Number:	#2 (7/11/19)	Sample Received By:	Tamara Oldaker
Project Location:	COG - LEA COUNTY, NM		

Sample ID: WSW-1 COMP 4' (H903085-08)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/06/2019	ND	2.00	100	2.00	8.02	
Toluene*	<0.050	0.050	09/06/2019	ND	1.97	98.7	2.00	4.46	
Ethylbenzene*	<0.050	0.050	09/06/2019	ND	2.04	102	2.00	6.60	
Total Xylenes*	<0.150	0.150	09/06/2019	ND	6.15	103	6.00	7.01	
Total BTEX	<0.300	0.300	09/06/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *88.0 %* *73.3-129*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/09/2019	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	09/06/2019	ND	205	103	200	0.162	
DRO >C10-C28*	<10.0	10.0	09/06/2019	ND	212	106	200	1.90	
EXT DRO >C28-C36	<10.0	10.0	09/06/2019	ND					

Surrogate: 1-Chlorooctane *80.4 %* *41-142*

Surrogate: 1-Chlorooctadecane *85.7 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Tetra Tech
Project Manager:	Mike Carmona
Address:	901 W Wall
City:	Midland State: Tx Zip: 79701
Phone #:	432-664-8185 Fax #:
Project #:	Project Owner:
Project Name:	Fascinator Fed Com 703H #8 7/11/2019
Project Location:	Lea Co, NM
Sampler Name:	Devin Dominguez

BILL TO

P.O. #:	
Company:	Concho
Attn:	Ike Tavarez
Address:	600 W Illinois
City:	Midland
State:	Tx Zip: 79701
Phone #:	432-701-8630
Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TPH	BTEX	Chlorides
H903085																	
1	Bottomhole-1 Comp 4'	C	1			X					X		9/6/19		X	X	X
2	" -2 Comp 4'	C	1			X					X				X	X	X
3	" -3 Comp 4'	C	1			X					X				X	X	X
4	NSW-1 Comp 4'	C	1			X					X				X	X	X
5	NSW-2 Comp 2'	C	1			X					X				X	X	X
6	SSW-1 Comp 4'	C	1			X					X				X	X	X
7	SSW-2 Comp 2'	C	1			X					X				X	X	X
8	WSW-1 Comp 4'	C	1			X					X				X	X	X

Relinquished By:	Date: 9/6	Received By:	
	Time: 11:25		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One) 0.9° #97
Sampler - UPS - Bus - Other: Corrected 1.3°

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

CHECKED BY: (Initials) TP.

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS: Rush!!

Analytical Report 646178

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Fascinator Federal Com #703H (7.11.19) Spill #2

17-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)

17-DEC-19

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

Reference: XENCO Report No(s): **646178**
Fascinator Federal Com #703H (7.11.19) Spill #2
Project Address: Lea County, NM

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) 646178. 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. 646178 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

Sample Cross Reference 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 (0-1')	S	12-12-19 00:00		646178-001
AH-1 (1'-1.5')	S	12-12-19 00:00		646178-002
AH-1 (2-2.5')	S	12-12-19 00:00		646178-003
AH-1 (3'-3.5')	S	12-12-19 00:00		646178-004
AH-1 (4'-4.5')	S	12-12-19 00:00		646178-005
AH-1 (5-5.5')	S	12-12-19 00:00		646178-006
AH-2 (0-1')	S	12-12-19 00:00		646178-007
AH-2 (1'-1.5')	S	12-12-19 00:00		646178-008
AH-2 (2'-2.5')	S	12-12-19 00:00		646178-009
AH-2 (3'-3.5')	S	12-12-19 00:00		646178-010

Certificate of Analysis Summary 646178

Tetra Tech- Midland, Midland, TX

Project Name: Fascinator Federal Com #703H (7.11.19) Spill #2

Project Id:
Contact: Mike Carmona
Project Location: Lea County, NM

Date Received in Lab: Thu Dec-12-19 04:15 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	646178-001		646178-002		646178-003		646178-004		646178-005		646178-006	
	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-12-19 00:00		Dec-12-19 00:00		Dec-12-19 00:00		Dec-12-19 00:00		Dec-12-19 00:00		Dec-12-19 00:00	
Chloride by EPA 300	***Extracted:***	Dec-13-19 08:15		Dec-13-19 08:15		Dec-13-19 08:15		Dec-13-19 08:15		Dec-13-19 08:15		Dec-13-19 08:15	
	Analyzed:	Dec-13-19 12:01		Dec-13-19 12:21		Dec-13-19 12:27		Dec-13-19 12:34		Dec-13-19 12:41		Dec-13-19 12:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		424	4.99	66.8	4.96	28.7	4.97	9.28	5.05	40.5	4.98	33.3	5.00

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 646178

Tetra Tech- Midland, Midland, TX

Project Name: Fascinator Federal Com #703H (7.11.19) Spill #2

Project Id:
Contact: Mike Carmona
Project Location: Lea County, NM

Date Received in Lab: Thu Dec-12-19 04:15 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	646178-007		646178-008		646178-009		646178-010					
	Field Id:	AH-2 (0-1')		AH-2 (1'-1.5')		AH-2 (2'-2.5')		AH-2 (3'-3.5')					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Dec-12-19 00:00		Dec-12-19 00:00		Dec-12-19 00:00		Dec-12-19 00:00					
Chloride by EPA 300	***Extracted:***	Dec-13-19 08:15		Dec-13-19 08:15		Dec-13-19 08:30		Dec-13-19 08:30					
	Analyzed:	Dec-13-19 12:54		Dec-13-19 13:01		Dec-13-19 09:02		Dec-13-19 09:34					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		365	5.00	157	5.04	150	4.97	160	5.00				

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

Version: 1.%

Jessica Kramer
Project Assistant

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-1 (0-1')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-001	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.15	Basis:	Wet Weight
Seq Number:	3110390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**424**	4.99	mg/kg	12.13.19 12.01		1

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-1 (1'-1.5')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-002	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.15	Basis:	Wet Weight
Seq Number:	3110390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.8**	4.96	mg/kg	12.13.19 12.21		1

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-1 (2-2.5')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-003	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.15	Basis:	Wet Weight
Seq Number:	3110390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.7**	4.97	mg/kg	12.13.19 12.27		1

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-1 (3'-3.5')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-004	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.15	Basis:	Wet Weight
Seq Number:	3110390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.28**	5.05	mg/kg	12.13.19 12.34		1

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-1 (4'-4.5')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-005	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.15	Basis:	Wet Weight
Seq Number:	3110390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.5**	4.98	mg/kg	12.13.19 12.41		1

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-1 (5-5.5')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-006	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.15	Basis:	Wet Weight
Seq Number:	3110390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.3**	5.00	mg/kg	12.13.19 12.47		1

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-2 (0-1')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-007	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.15	Basis:	Wet Weight
Seq Number:	3110390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**365**	5.00	mg/kg	12.13.19 12.54		1

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-2 (1'-1.5')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-008	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.15	Basis:	Wet Weight
Seq Number:	3110390				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**157**	5.04	mg/kg	12.13.19 13.01		1

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-2 (2'-2.5')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-009	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.30	Basis:	Wet Weight
Seq Number:	3110518				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**150**	4.97	mg/kg	12.13.19 09.02		1

Certificate of Analytical Results 646178

Tetra Tech- Midland, Midland, TX

Fascinator Federal Com #703H (7.11.19) Spill #2

Sample Id:	**AH-2 (3'-3.5')**	Matrix:	Soil	Date Received:	12.12.19 16.15
Lab Sample Id:	646178-010	Date Collected:	12.12.19 00.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.13.19 08.30	Basis:	Wet Weight
Seq Number:	3110518				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**160**	5.00	mg/kg	12.13.19 09.34		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 646178

Tetra Tech- Midland

Fascinator Federal Com #703H (7.11.19) Spill #2

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110390 Matrix: Solid Date Prep: 12.13.19
MB Sample Id: 7692378-1-BLK LCS Sample Id: 7692378-1-BKS LCSD Sample Id: 7692378-1-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	270	108	255	102	90-110	6	20	mg/kg	12.13.19 08:34	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110518 Matrix: Solid Date Prep: 12.13.19
MB Sample Id: 7692386-1-BLK LCS Sample Id: 7692386-1-BKS LCSD Sample Id: 7692386-1-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	249	100	249	100	90-110	0	20	mg/kg	12.13.19 08:52	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110390 Matrix: Soil Date Prep: 12.13.19
Parent Sample Id: 646108-043 MS Sample Id: 646108-043 S MSD Sample Id: 646108-043 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.43	249	247	96	265	103	90-110	7	20	mg/kg	12.13.19 08:54	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110390 Matrix: Soil Date Prep: 12.13.19
Parent Sample Id: 646108-050 MS Sample Id: 646108-050 S MSD Sample Id: 646108-050 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	52.3	250	333	112	331	111	90-110	1	20	mg/kg	12.13.19 11:41	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110518 Matrix: Soil Date Prep: 12.13.19
Parent Sample Id: 645827-001 MS Sample Id: 645827-001 S MSD Sample Id: 645827-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	225	252	446	88	453	90	90-110	2	20	mg/kg	12.13.19 14:42	X

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 646178

Tetra Tech- Midland

Fascinator Federal Com #703H (7.11.19) Spill #2

Analytical Method:	**Chloride by EPA 300**			Prep Method:	E300P
Seq Number:	3110518	Matrix:	Soil	Date Prep:	12.13.19
Parent Sample Id:	646178-009	MS Sample Id:	646178-009 S	MSD Sample Id:	646178-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	150	249	387	95	389	96	90-110	1	20	mg/kg	12.13.19 09:08	

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

1046178

Page 1 of 1

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: Fascinator Federal Com #703H (7.11.19) Spill #2

Project Location: (county, state) Lea County, NM

Project #:

Invoice to: COG Ike Tavarez

Receiving Laboratory: Xenco

Sampler Signature: Mike C

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	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride 300.0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	AH-1 (0-1')	12.12.19			X				X			1	N														X							
	AH-1 (1'-1.5')	12.12.19			X				X			1	N														X							
	AH-1 (2'-2.5')	12.12.19			X				X			1	N														X							
	AH-1 (3'-3.5')	12.12.19			X				X			1	N														X							
	AH-1 (4'-4.5)	12.12.19			X				X			1	N														X							
	AH-1 (5'-5.5')	12.12.19			X				X			1	N														X							
	AH-2 (0-1')	12.12.19			X				X			1	N														X							
	AH-2 (1'-1.5')	12.12.19			X				X			1	N														X							
	AH-2 (2'-2.5')	12.12.19			X				X			1	N														X							
	AH-2 (3'-3.5')	12.12.19			X				X			1	N														X							

Relinquished by: Mike Carmona Date: 12.12.19 Time: 4:15 pm
Received by: [signature] Date: 12/12/19 Time: 1615

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

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

LAB USE ONLY

Sample Temperature 5.5

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

Final 1.000

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 12/12/2019 04:15:00 PM

Work Order #: 646178

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.5
#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: 12/12/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 12/13/2019
Jessica Kramer